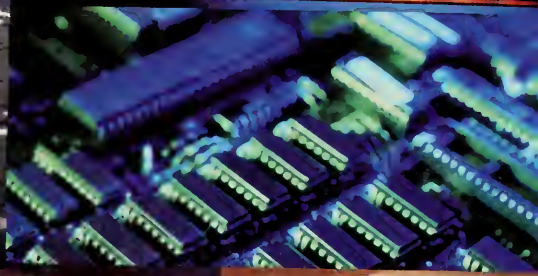
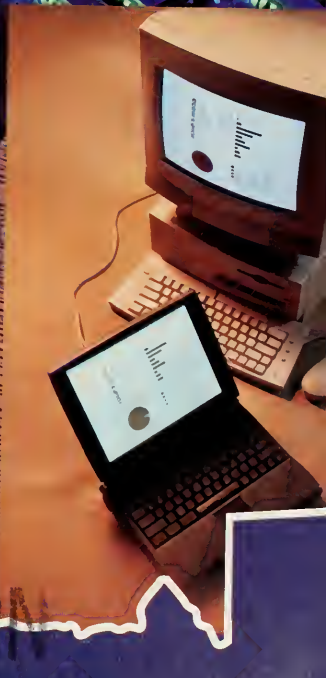
State of Montana

1999-2000 Information Technology Plan





Using Information Technology to Help Montana Citizens

Montana Online
http://www.state.mt.us

State of Montana

1999-2000 Information Technology Plan

Using Information Technology to Help Montana Citizens

Published biennially by the Information Services Division (ISD) of the Department of Administration, the *Information Technology Plan* provides an overview of the state's information technology accomplishments, environment, initiatives, and plans. Materials may be reproduced without permission. Alternative formats of this document will be provided upon request to people with disabilities.

Should you have questions or comments regarding the *2000-2001 Information Technology Plan*, please contact:

Wendy Wheeler
Policy, Development, and Customer Relations Bureau
Information Services Division
Department of Administration
406-444-2700
E-mail: wwheeler@state.mt.us
Internet site: **http://www.state.mt.us/isd**

PUBLISHED BY

Information Services Division
Department of Administration
State of Montana
P.O. Box 200113
Sam W. Mitchell Building, Room 229
Helena, MT 59620-0113
Phone: 406-444-2700
Fax: 406-444-2701
January 1, 1999

Table of Contents

Acknowledgments

The *2000-2001 Information Technology Plan* could not have been compiled without the help of many individuals in each of the agencies in the State of Montana. We thank them for their cooperation and participation.

Special thanks to the following ISD staff whose efforts were invaluable during the creation of the *Information Technology Plan:*

PROJECT COORDINATORS

Brian Dostal
Audrey Hinman

TOPIC AUTHORS

Mike Bloom
Brett Boutin
Brian Dostal
Audrey Hinman
Linda Kirkland
Stewart Kirkpatrick
Surry Latham
Scott Lockwood
Brian McCullough
Lynne Pizzini
Wendy Wheeler

LAYOUT

Diana MacDonald

1250 copies of this public document were published at an estimated cost of $9.85 per copy, for a total cost of $12,300, which includes $12,300 for printing and $0 for distribution.

Office of the Governor
State of Montana

Marc Racicot
Governor

State Capitol
Helena, Montana 59620-0801

Dear Reader:

Information technology is playing a major and vital role in our daily lives and is shaping the landscape of the future. This is also true in Montana State Government where information technology assists employees in performing a substantial share of the real work required by our citizens. Information technology is in many ways the "engine" that moves our state government. Without it we would quickly fall by the wayside.

It is my pleasure to present the *2000-2001 Information Technology Plan*. This plan represents the culmination of efforts by the Information Services Division of the Department of Administration in coordination with all state agencies.

Included in this plan is an overview of information technology projects in each agency as well as several enterprise topics that affect information technology strategies within the State of Montana. The plan also shows many of the coordinated efforts that state agencies have undertaken to streamline their business processes and to provide more, better, and quicker information to their customers.

It is imperative that state and local governments position themselves to take advantage of new technologies and to participate in the enterprise issues mentioned in this document. Only through cooperative efforts can we begin to expand relationships to better serve the citizens of the State.

This publication represents only one step in an ongoing process to inform our law makers and other interested parties about information technology accomplishments within state government and to share strategic plans with our fellow state workers. It is my hope that all readers of this document will gain some bit of information that will aid them in performing their jobs more effectively.

Sincerely,

MARC RACICOT
Governor

Telephone (406) 444-3111 Fax (406) 444-5529

Executive Summary

PURPOSE

The publication of this book is in response to several Montana statutes, especially 2-17-501, MCA that establishes, "...the director of the Department of Administration, in cooperation with state agencies, shall...establish policies and a statewide plan for the operation and development of data processing for state government..."

INTRODUCTION

The following is a quote from *The Digital State 1998 – How State Governments Are Using Digital Technology* which was published by The Progress & Freedom Foundation in September of 1998. The quoted material emphasizes the importance of information technology in our society today and is a good lead-in to the next section on how Montana's state agencies are using information technology to perform their work.

> "Earlier this year, the United States Department of Commerce issued a report, *The Emerging Digital Economy,* which detailed the extent to which digital technologies are changing the way we make things and create value. Among its conclusions: The Information Technology industry alone accounts for more than a third of economic growth in the United States – 41% in 1995 alone.
>
> The rapid emergence of digital technologies in the private sector has created both challenges and opportunities for government, and for state governments in particular. Businesses increasingly demand the ability to interact electronically with state governments, just as they do with other customers and suppliers. And, many observers attribute citizen dissatisfaction with government, at least in part, to their sense that governments are running behind in achieving the efficiencies and providing the convenient services digital technologies permit.
>
> At the same time, digital technologies are providing state governments with opportunities to integrate programs, involve citizens and manage information in ways never before possible. Increasingly, states are taking advantage of these opportunities. Via the Internet and other digital technologies, citizens around the country are finding their way to government agencies and services without ever having to leave their homes, offices or cars. States are now providing one-on-one assistance through e-mail correspondence, online permit applications, and electronic tax filing, to name just a few of the functions now made accessible through state web sites." [1]

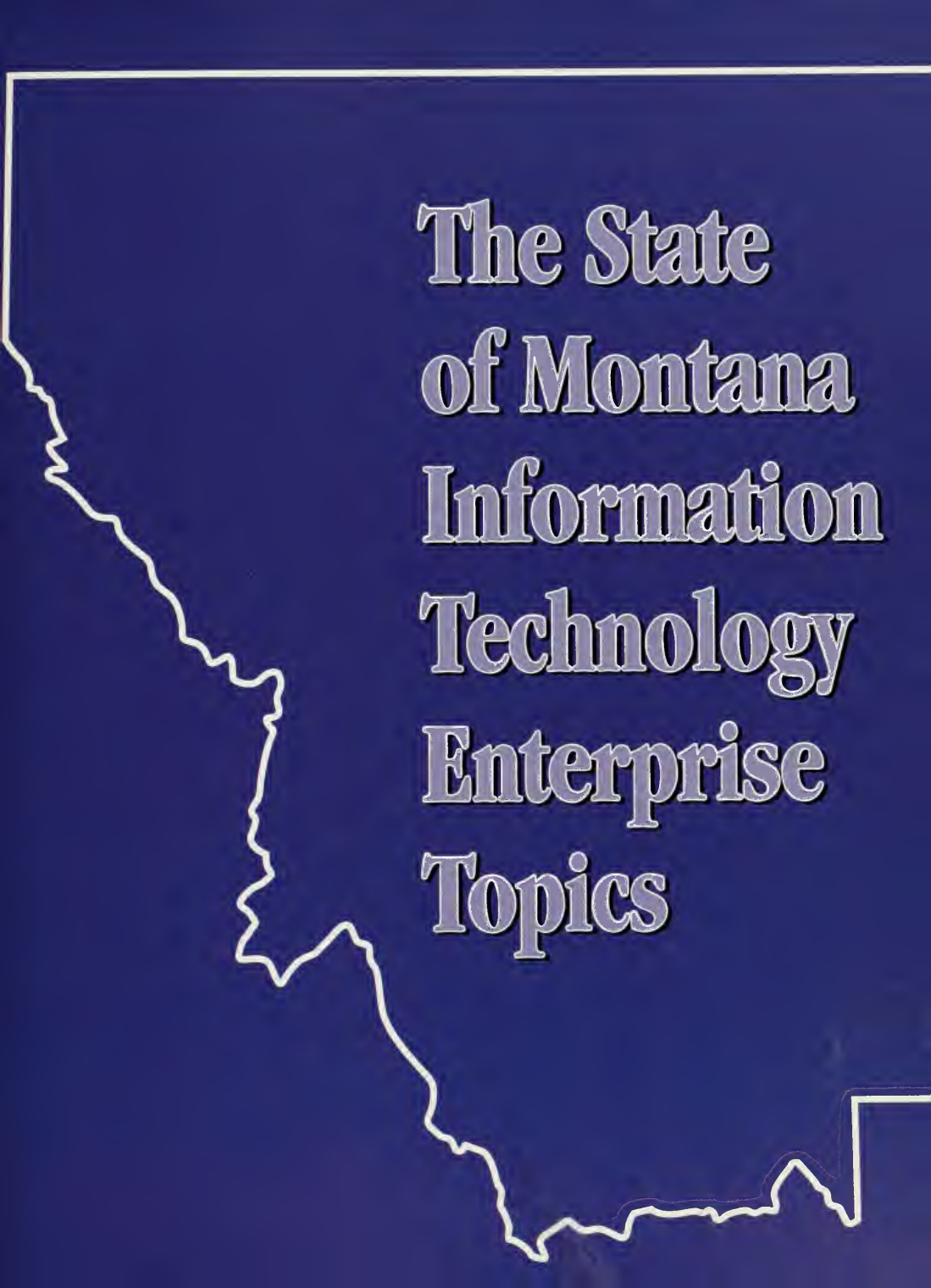
The theme of the *2000-2001 Information Technology Plan* is "Using Information Technology to Help Montana Citizens." This theme helps remind us of why government exists: to assist the public. A strong information technology (IT) enterprise provides the appropriate organization and tools to enable state agencies to focus on core business competencies and to efficiently deliver information and services to Montana's citizens; thus, fulfilling the theme of this publication.

State agencies continue to take bold steps in using information technology to meet business needs. Agencies are enabled and encouraged to take these steps by the support and sponsorship they receive. IT sponsorship comes from the citizens' representatives – the legislators – through their participation on IT committees, enacting of IT statutes, and appropriation of funds for IT initiatives.

The vision for using information technology to achieve efficient and effective government services comes from the legislature and top management in the Executive, Legislative, and Judicial branches. This vision is vital to empowering Montana, because without vision and direction, the IT enterprise can struggle in a status quo, non-progressive, reactive mode with little return on technology investments.

Throughout this document, the reader will see the results of agencies' careful planning and strategizing, as well as their cross-boundary cooperative IT efforts. Cross references will be seen throughout the document, as well as Internet web site references where additional information may be obtained. Many of these references are made in an effort to emphasize the cooperative efforts state agencies have undertaken which are essential to increasing government effectiveness and the State of Montana's responsiveness to our customers' needs.

[1]*The Digital State 1998 – How State Governments Are Using Digital Technology,* copyright 1998 by the Progress & Freedom Foundation.


The State
of Montana
Information
Technology
Enterprise
Topics

The State of Montana Information Technology Enterprise Topics

There are many information technology projects in progress or planned for future implementation in the State of Montana. These initiatives cover a wide range of topics from communication services, to Year 2000 issues, to specific technology movements within the State such as imaging and desktop software.

Throughout the following pages, the reader will receive a brief examination of current information technology issues being dealt with and gain information about the state's status with respect to each project. While the Information Services Division (ISD) of the Department of Administration is leading most of the topics in this section, some of the topics are led by other agencies; thus, representing the cross-agency efforts underway in the State's enterprise IT initiatives.

Year 2000

http://www.state.mt.us/isd/year2000

The Year 2000 Problem (or Y2K for short) is the single largest and most pervasive information technology challenge in the history of mankind. It is unique in that it affects all nations, cultures, and economies and the effects occur at the same time for everyone. Furthermore, our global economy is so intertwined that even if we do a good job dealing with our local Y2K issues, we will be affected by what our trading partners around the world do. Failure to effectively resolve the issue can cause dire consequences for all Montanans.

So what is the Y2K problem anyway? It is the result of a decades-old computer programming convention of storing only the last two digits of the four-digit year in computer files. In the early years of the computer industry computer storage space was both expensive and in limited supply. Programmers had to be creative in saving storage space, resulting in the widely used convention of only storing the last two digits of the year (e.g. 97 instead of 1997). It was thought that these systems would be replaced long before the turn of the century, so no significant problem was anticipated. However, the result of this practice is that much of the computer software still in use today cannot correctly handle dates outside the range of 1900-1999 and will begin to fail or yield incorrect results as the date becomes 2000.

There are more than 700 computer systems in the State of Montana, totaling over 40,000 individual programs that contain date references. Additionally, there are over 10,000 PCs in the State that need to be examined and possibly repaired or replaced due to Y2K-related internal problems.

In a March 16, 1997 letter to department directors and elected officials, Governor Racicot indicated that, given the importance, profile, and potential exposure that the Year 2000 problem presents, Y2K project work should be appropriately prioritized by the agencies. He directed ISD to provide statewide coordination and oversight of the state's efforts to achieve Year 2000 compliance for computer systems.

Up-to-date information on the status of the state's computer systems and their Y2K compliance can be found at **http://www.state.mt.us/isd/year2000.**

COMPLIANCE STATUS

In fulfilling their oversight role, ISD appointed a full time Year 2000 Compliance Officer and developed a web-based application, the Year 2000 Compliance Reporting System, to provide a centralized reporting system for the tracking of compliance work on application systems in all agencies.

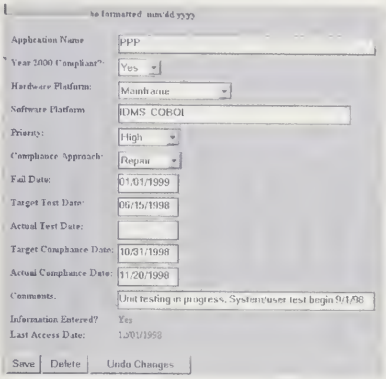


Figure 1 – Information gathered by the Year 2000 Compliance Reporting System for each agency computer system.

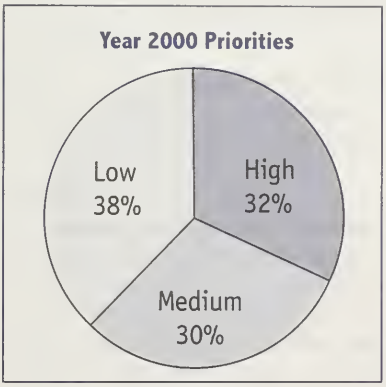


Figure 2 – Each state agency analyzed their computer systems in regards to the potential impact if these systems were to fail. They assigned priorities based on a high, medium and low classification. The breakdown of priorities is shown as of December 1998.

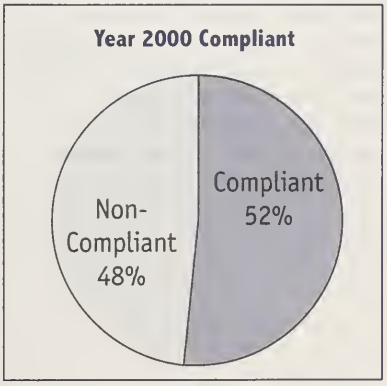


Figure 3 – As of December 1998, 52% of the state's computer systems were Year 2000 compliant.

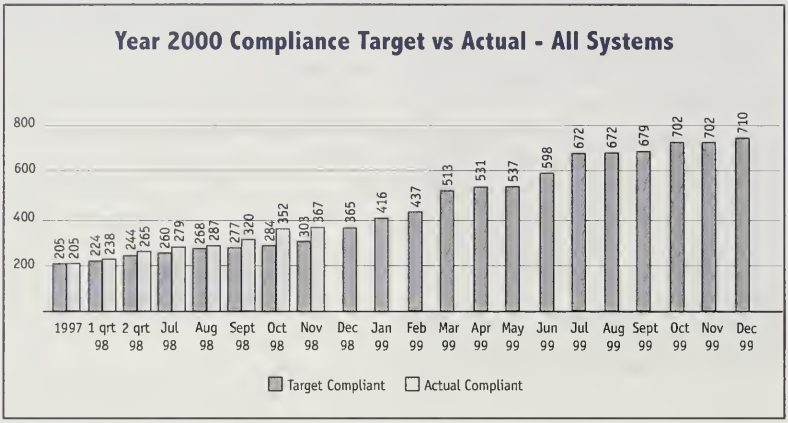


Figure 4 – The schedule for bringing the rest of the state's systems into compliance.

TESTING

ISD has configured testing facilities for Year 2000 testing. Agencies can schedule testing on the mainframe, on an Oracle server, and on a Novell NetWare server.

UNIVERSITY SYSTEM

The Montana University System is addressing the Y2K issue independently. Each campus is coordinating their efforts through Montana State University or the University of Montana. The University System is in the process of replacing many of its administrative systems with the Banner software system. This system is expected to become fully operational by July 1999. Other computers, not Banner related, are scheduled to be repaired or replaced by July 1999. The University System has a variety of network, laboratory, test, research, alarm, and monitoring equipment which may house embedded processors that can be effected by Y2K. Third party support agreements or warranties cover these systems; and thus, the University System is engaged in a formal discovery and resolution process with their vendors. Desktop compliance is being handled at the departmental level and will be a top priority in the July-December 1999 time frame.

HARDWARE IMPACTS

While the most well known Y2K problems relate to computer software, there are impacts in the hardware area. The most wide-ranging impact relates to the Basic Input/Output System (BIOS) that is in personal computers (PCs). The majority of PCs built prior to the summer of 1996 will not correctly "rollover" the date on January 1, 2000.

ISD has recommended agencies conduct a thorough inventory of all PCs and determine the BIOS compliance of individual machines. Most PCs have now been checked for BIOS problems and corrected when necessary.

TELECOMMUNICATIONS/VOICE/VIDEO EQUIPMENT

ISD telecommunications equipment and software is predominantly Y2K compliant; however the Conference Calling System must be replaced. The Integrated Voice Response System used by the Department of Labor and Industry's Unemployment Division and the Department of Revenue must be upgraded. Also, the current Voice Mail System will be upgraded to assure Year 2000 compliance.

DATA NETWORK

All equipment and software for the data network has been reviewed for Year 2000 compliance. The state's network software is compliant and any non-compliant network equipment will be replaced before 2000.

LEGISLATION

There is growing concern over possible litigation resulting from Y2K failures. There are litigation estimates as high as $1 trillion worldwide relating to the problem. Many states have passed legislation relating to the Y2K issue. Following suit, Montana's Department of Administration has drafted legislation to limit the state's liability in potential cases involving failure of government systems due to the Year 2000 problem. The proposed legislation seeks to keep our resources focused on fixing the problem rather than on avoiding costly litigation. The State will still be obliged to fulfill its mandated services and pay all legal obligations. If this legislation passes, the State would not be liable for other than actual losses caused by Y2K computer failures.

CONCLUSION

There has never been a problem like the Year 2000 problem and there probably never will be again. The breadth and scope of this global issue defies description. Failure in one sector can have dire consequences on many other sectors of our society. If not dealt with aggressively and effectively, significant disruptions to our way of life are likely to occur. The State of Montana is actively working on resolving the issue prior to December 1999. However, much work remains to be completed and the highest priority must continue to be placed on this problem to ensure minimal societal disruptions.

MT PRRIME

http://www.state.mt.us/doa/mt_prrime/montpri.htm

The Montana Project to Reengineer the Revenue and Information Management Environment (MT PRRIME) involves replacing the state's core financial, human resources and asset management systems. These systems were built 20 to 25 years ago, are not Year 2000 compliant, and are no longer able to meet the business needs of state agencies. MT PRRIME will improve revenue and expenditure information, enhance revenue forecasting and expenditure monitoring, streamline business processes, maximize the ability to plan for the future using relevant management information and improve service to Montana's citizens.

BACKGROUND

Senate Joint Resolution (SJR) 23 passed during the 1995 Legislative Session stated that "major improvements in the core management support systems of state government offer the most promising opportunities to improve overall government operation that are available today and to truly prepare government for the 21st century".

The Department of Administration contracted with Deloitte and Touche to assist in an interim study and planning process to prepare a report for the 1997 Legislative Session for determining how the State could move forward to provide management support systems. As a result of that contract and with the insight of a committee of state agency managers, it was unanimously agreed that the recommendation to the 1997 Legislature should be to buy a centralized software suite of integrated, enterprise-wide applications from a single vendor.

The proposal resulting from the SJR 23 interim study was House Bill (HB) 188 that provided $16,000,000 for the replacement of the state's legacy systems and $500,000 for a new statewide budget development system. HB 188 was approved by the 1997 Legislature to provide funding for the replacement of the legacy systems through the sale of bonds which would subsequently be paid off by charging all state agencies for the cost of the debt service each year beginning July 1, 1998. The state's legacy systems are the Statewide Budgeting and Accounting System (SBAS), Payroll, Personnel and Position Control (PPP), the Property Accountability Management System (PAMS), and the Montana Integrated Budget System (MIBS).

IMPLEMENTATION OF MT PRRIME

After passage of HB 188 the Department of Administration, with the assistance and support of several state agencies, reviewed various vendors. The final selection was PeopleSoft software for the replacement of SBAS, PPP and PAMS, and Legacy Solutions software for MIBS. Andersen Consulting was selected as the integrator to assist the Montana team to design, build and implement the systems. The focus of the implementation is to provide the functionality that supports the business processes of

the State of Montana with a continuous migration to best practices identified in the industry. This approach will truly prepare the State of Montana for the 21st century. A steering committee of Montana State Government executives is providing oversight during the implementation and assisting in providing direction to the project.

In October 1997, a team of over 40 staff consisting of state employees and Andersen Consulting employees started the process of determining what was necessary to adapt the PeopleSoft software and Legacy Solutions software to the specific needs of Montana.

Implementation of the replacement of the state's legacy systems will be complete by July 1999. SBAS, PPP, MIBS, and PAMS are being replaced with database software housed on a file server which is the technology consistent with general industry trends. The new PeopleSoft financial and human resource systems and the Legacy Solutions budget development system will provide the foundation for all state agencies to improve their business processes by eliminating redundancies, streamlining procedures, and improving access to timely information.

SYSTEMS IMPLEMENTED AS OF OCTOBER 1998

The first to be implemented was the budget system referred to as the Montana Budgeting, Analysis, and Reporting System (MBARS). Agencies used the system to capture their budget requests for FY00/01 and submit them to the Governor's Office of Budget and Program Planning (OBPP).

OBPP used MBARS to create the Governor's legislative proposal which in turn is analyzed by the Legislative Fiscal Division in preparation for the 1999 Legislative Session.

PAMS, the state's legacy property accountability management system, was replaced by the PeopleSoft Asset Management module in September 1998.

BALANCE OF IMPLEMENTATION

PPP is scheduled to be replaced by the implementation of PeopleSoft human resource modules during April 1999. The PeopleSoft modules replacing PPP are Payroll, Time and Labor, and Human Resources. The state's benefit administration system will be replaced by the PeopleSoft Benefits Administration module.

SBAS is scheduled to be replaced by implementation of PeopleSoft financial modules during July 1999. The PeopleSoft modules replacing SBAS are General Ledger, Accounts Payable, Accounts Receivable, and Purchasing.

CONCLUSION

Management of state programs will be enhanced with consistent, timely information statewide enabling managers to make more informed decisions. During the next two years managers will be learning new ways to obtain information directly from the system rather than working through others.

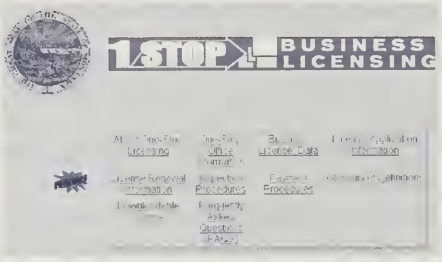
One-Stop Business Licensing

http://www.state.mt.us/onestop

During the 1997 Legislative Session, Montana lawmakers enacted HB 391 to begin what has come to be known as the "One-Stop Business Licensing" Project. The multi-agency initiative is intended to streamline, simplify, and centralize the business licensing process within the State of Montana. The One-Stop Business Licensing Project is managed by the Department of Revenue.

The primary goal of one-stop licensing is to provide a single point of contact within the State for a variety of business licensing needs. These include, but are not limited to, obtaining and renewing licenses, permits, and registrations; paying fees; inquiring about license status; and requesting information about various licenses, and the licensing process.

In addition, the project is designed to eliminate redundant licensing tasks within the State. For example, a single licensing database, accessible by all partner agencies, will maintain key licensing data, and important employer information. This information can then be shared across agencies.



http://www.state.mt.us/onestop
One-Stop Business Licensing web site.

PILOT PROJECT

Because nearly every state agency has some kind of license, fee or permit, HB 391 authorized a pilot project to begin implementation of One-Stop Business Licensing on a limited scale. The pilot project, operational in July 1998, focuses on the specific licensing needs of grocery stores, convenience stores, and gasoline stations.

One-Stop Business Licensing offers Montana businesses a significant reduction in the labor and paperwork involved in licensing. Some of the key benefits include:

- One point of contact for obtaining or renewing a majority of the licenses required to operate a business.
- One master form to obtain or renew these licenses, eliminating the redundancy of filling out multiple forms. Renewal forms may be completed by telephone.
- One payment (writing one check) rather than making a separate payment for each license. Credit cards are accepted.

Licenses included in the pilot project are:

- Business registration (assumed business name) – Office of the Secretary of State
- Egg license – Department of Livestock
- Petroleum dealers license (pumps) – Department of Commerce
- Weighing device license (scales) – Department of Commerce
- Nursery license – Department of Agriculture
- Food purveyor license – Department of Public Health and Human Services
- Underground tanks registration – Department of Environmental Quality
- Cigarette license – Department of Revenue
- Off-premise beer and wine license renewal – Department of Revenue
- Employer registration – Department of Revenue

At least two licenses that may be required by a grocery store, convenience store, or gasoline station are not included in the One-Stop Business Licensing Project. They are the meat inspection license and the lottery license. These licenses will continue to be issued and renewed by the agencies that currently administer them.

CONCLUSION

The pilot project has been a positive experience for the state agencies involved and well received by Montana's business community. Legislation is being prepared to expand the One-Stop Business Licensing Project to include more license types, and serve a wider range of businesses.

Public Safety Communications

http://www.state.mt.us/isd/groups/safe

In light of anticipated regulatory changes, concerns with the State's aging radio systems, and technology trends the Department of Administration created an advisory council comprised of affected state, federal and local government representatives.

Lois Menzies, Director of the Department of Administration, organized the Public Safety Communications Task Force (PSCTF) in the fall of 1994 with explicit instructions to address the needs and requirements of the State's public safety system users.

The Task Force was asked to investigate the potential of designing a statewide, consolidated radio communications system that would meet the requirements of all public safety users.

COMMUNICATIONS CONCEPT DESIGN

The major activities of the Task Force included the issuance of a Request for Proposal (RFP) to select a consulting firm to assist the State in developing a Communications Concept Design. The amount of $200,000 was authorized by the Legislature for this project. The Warner Group, a firm specializing in public safety and communications consulting, was chosen to undertake the project.

The final design was accepted by the Task Force in May 1997. The *Concept Design Action Plan* included recommendations to develop engineering specifications, a permanent governance structure, and detailed figures associated with funding strategies and final cost allocations.

Governor Racicot created, by Executive Order, in November 1997, the Montana Public Safety Communications Council (MPSCC). This new Council replaced the Task Force and continues working on specific tasks outlined in the Concept Design. For more information on the MPSCC, see page 134.

SYSTEM DESIGN

Recommendations from the *Communications Concept Design* were incorporated into ISD's 1997 budget proposal and presented to the 1997 Legislature. The Legislature approved funding for completing a system design using a combination of funding sources, including private funding from the Montana Power Company.

The State issued a RFP to obtain the services of an engineering consulting firm to assist in implementing the recommendations included in the Concept Design. Spectrum Resources, Inc., of St. Charles, MO, was selected to develop the system design.

Recommendations for the construction and operation phases of the project will be presented to the 1999 Legislature.

CONCLUSION

The proposed system is a comprehensive solution to the existing statewide problems associated with the over 100 current aged and less reliable systems. It provides for advanced features, including trunking capabilities, while minimizing the number of required sites, therefore reducing capital costs. It would use VHF high band frequencies and "Project 25" standards. It offers state, local, and federal agencies a cost effective approach to meet future requirements and to supply a technological solution well-suited to support multi-agency operations. In addition, by integrating data, Montana has the opportunity to provide field personnel with the functionality of a mobile office everywhere voice radio is available.

Telecommunications Network Planning

http://www.state.mt.us/isd/groups/sec

The SummitNet Executive Council (SEC) recognized that, given the rapid changes in technology and regulatory practices, it was necessary to evaluate current SummitNet operations and services and explore options for future direction and development. SummitNet is the state's multi-protocol wide area network. In November 1997, SEC sponsored a Telecommunications Visioning Conference with participants representing state and local government, higher education, public libraries, the Office of Public Instruction, K-12 school districts, and the telecommunications industry.

ACTIVITIES

As a result of the conference, SEC developed a list of subjects on which they intended to place emphasis. These areas of interest were defined by the participants as being needed, and SEC recognizes them as important aspects of Montana's overall telecommunications future:

- Define SummitNet's role
- Work with stakeholders to establish standards
- Market SummitNet services
- Enhance technical support to end users
- Provide training to end users
- Use focus groups
- Audit network utilization
- Expand the vision statement

SEC issued a Request for Proposal (RFP) to acquire telecommunications strategic planning consulting services. The RFP was issued in January 1998. The contract was awarded to Federal Engineering, Inc., headquartered in Fairfax, Virginia.

The statement of project objectives is as follows:

> "To describe and recommend statewide telecommunications investments which maximize access to advanced telecommunications for all Montana citizens, enhance economic development potential in Montana and ensure that Montana fully participates in global networking initiatives and in the "Information Age". As a major component, there will be a modern statewide telecommunications network, provided by the private sector to the greatest extent economically feasible, which optimizes the delivery of state government, education, and other public services."

The objectives of the project are:

- Prepare a comprehensive inventory and assessment of the current telecommunications infrastructure and information networks in Montana.
- Identify new telecommunications and information technologies and plans for future, public and private development.
- Identify current and future information application requirements for communities of interest including: state and local government; higher education; K-12 education; public libraries; tribal government; and others, such as but not limited to: health care; economic development organizations; tribal colleges, community colleges, private colleges, and community networks.
- Identify policy issues for consideration by appropriate policy making entities.
- Identify the implications that a proper network design would have on economic development objectives.
- Engage Montana's communities of interest in preparing telecommunications strategies and recommendations, with a business case, budget, and proposed time line.
- Recommend an ongoing process to implement, review and revise the strategies to meet current and future needs.
- Provide feedback and continuing dialog with the communities of interest.
- Inform Montana public officials about the strategies, recommendations, barriers, and policy issues.

CONCLUSION

At the time of publication, recommendations from Federal Engineering were being finalized. The final report will be delivered to State officials in December 1998. The telecommunications plan will identify a recommended course of action and provide an estimated budget. It will also include funding alternatives, cost recovery methods, and a proposed time line for implementation. Additionally, the plan will anticipate the impact on staffing, organization, and support required, ensuring successful implementation of the recommended option.

Geographic Information Systems

Geographic data is voluminous. Imagine all the data associated with every stream segment or every parcel of land in Montana. Geographic Information Systems (GIS) are tools that help manage that tremendous amount of data. One definition of GIS follows:

> The Geographic Information System (GIS) is composed of hardware, software, data, and people, used for assembling, storing, manipulating, and displaying data which contains physical locations (geographic coordinates) of features and information about those features (attribute data).

An example of how GIS databases may be queried would be to ask the question "How many commercially zoned parcels located in city X are within 500 feet of an arterial highway, have existing sewer and water service, and are within 5 miles of the local airport?" Using tools embedded in GIS software you can examine cadastral, road, infrastructure, and zoning databases to find the answer.

GIS technology can be used for scientific investigations, resource management, and development planning. For example, a GIS might allow emergency planners to easily calculate emergency response times in case of natural disaster, or agencies or citizens may use GIS to find wetlands areas. Health and social service officials may turn to GIS to help analyze why cancer or heart disease is prevalent in a particular area or why many worker compensation cases come from a certain location.

Increasingly State of Montana agencies are turning to GIS as a better way to manage an increasing workload and to make important policy decisions. State agencies must interact with local, federal, and private entities to accomplish work. These entities are also turning to GIS as a decision making tool.

GIS HELPING MONTANA CITIZENS

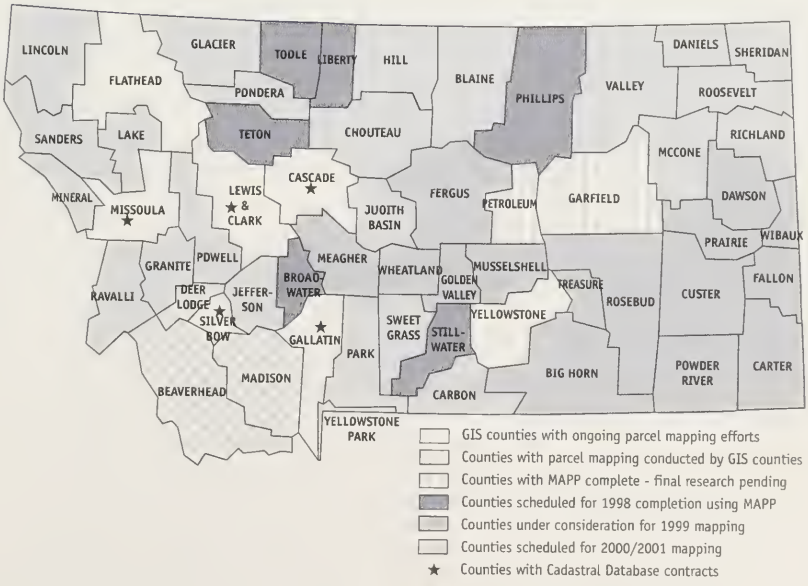
Montana citizens, private enterprise, and all levels of governmental entities use spatial data every day in their decision making processes. One of the primary benefits of GIS is to improve access to spatial data. The Natural Resource Information System (NRIS) provides excellent access to a variety of spatial data at their web site, **http://nris.state.mt.us/gis/gis.html**. For a preview of the way local governments can provide citizens with property information, visit Yellowstone County's web site at **http://www.ystone.mt.gov.**

GIS applications are benefiting many Montana citizens. For example, Butte-Silver Bow provides custom-mapping services that are used by realtors, developers and other business interests. These services were not available before GIS was implemented. The drought index maps produced at the NRIS are reviewed by the Governor's Drought Advisory Council and provide vital information to the agricultural community. GIS technology has long been used to assist the Superfund cleanup of the Clark Fork Basin. As the technology matures and evolves, fields such as health care, social services, and education will use the technology to provide faster, more efficient services to Montana taxpayers.

MONTANA CADASTRAL DATABASE PROJECT

Perhaps the largest geo-spatial data collection effort underway in Montana at this time is the Montana Cadastral Database Project. A cadastral database is one that portrays land ownership and is arguably the most accessed database in Montana. The Montana Cadastral Database Project will assess the status of Montana's parcel maps, work with all parties to develop statewide cadastral standards, and assist in developing local and regional solutions for digital map creation and maintenance where appropriate. It will also provide education and training opportunities and coordinate the diverse project components in order to develop land information systems that will interface to form an appropriately scaled statewide cadastral database. This database will be the best possible representation of land parcels that is practical and affordable now, with a built in growth path for improvement in the future. It will be documented with consistent standards, distributed through a centralized point of contact, and maintained for all Montana citizens to access, now and in the future. The Montana Cadastral Database Project is managed by the GIS Services and Coordination Section in ISD.

Montana Cadastral Database Project Map



STATE GIS COORDINATION

Montana has long been recognized as a leader in GIS development and coordination. The early efforts of NRIS paved the way for GIS applications in the natural resource field and establishment of one of the first National Spatial Data Infrastructure (NSDI) nodes for data search and distribution. The Montana GIS Interagency Technical Working Group (TWG), the Montana Local Government GIS Coalition (MLGGC), and the Montana GIS Users Group all provide useful coordination of GIS efforts. In 1997, Governor Marc Racicot, by Executive Order created the Montana Geographic Information Council (MGIC) to provide policy level direction and promote efficient and effective use of resources for matters related to geographic information. For more information on MGIC, see page 130 or **http://www.state.mt.us/isd/groups/mgic.**

CONCLUSION

GIS technology continues to evolve at a rapid pace. What once was considered a rather elitist field is progressing into a tool that will be commonly available on the desktop, much like word processing software. Montana has barely scratched the surface of the full capabilities of GIS. The State of Montana is dedicated to the advancement of the technology and to efficient and cost effective collection, documentation, distribution, and maintenance of spatial data.

ITAC Strategic Planning

http://www.state.mt.us/isd/groups/itac

The Information Technology Advisory Council (ITAC) along with additional agency and university representatives met in December 1997 to continue strategic planning for the enterprise. Past planning sessions have resulted in the development of subsequent legislative agendas that have proven to be well thought out and also well received. Information technology (IT) is an essential resource and ongoing planning is essential for proper management.

Strategic planning is idea gathering and issue identification followed by implementation. Ideas need to be integrated with the state's operations or the enterprise will be faced with failure.

DEFINITION OF THE ENTERPRISE

After considerable discussion, participants adopted the following definition of the enterprise as it relates to information technology:

> "The enterprise is all agencies of the State, including the University System, and participating local government and educational entities, working collaboratively to use, share, and leverage, to the greatest extent possible, the investments made in IT. To this end, agencies of the State, and participating entities, share systems and networks, use standard software and hardware, and train employees in common techniques."

ISSUES IDENTIFIED

Participants identified seven enterprise-wide IT issues. For each issue they formed questions and identified strategies for dealing with those issues.

Resources

1. Does IT affect revenue base?
2. How would we ensure equitable distribution of available resources to establish base threshold without stifling greater engagement?
3. How do we make decisions about cost recovery for IT services (demand)?
4. How do we share resources/costs?
5. How to better coordinate IT to ensure the greatest benefit (recognize, incentive...)?
6. How do we use resources to create incentives?
7. How do we consider cost beyond acquisition (total cost of ownership)?
8. Integration/consolidation of multi-agency services in distributed locations?

Flexibility and Adaptability to Change

1. Is there a meaningful opportunity to participate in the change initiative?
2. Is reengineering (BPR) needed?
3. If so, what is the process for business process engineering?

4. How do we manage change once it has been identified?
5. How do we ensure participation opportunities?
6. How does an organization achieve flexibility to respond to changes in technology?
7. How do we educate management in IT?
8. How do we make more informed decisions?
9. What is the sensitivity to the pace of change?

Support and Training

1. How do we provide training to all levels of IT users?
2. How do we attract and sustain qualified IT staff?
3. How do we determine the appropriate approach to support services?

Governance

1. How do we make constructive use of the tension created by the need to balance efficiencies of standardization with the needs for unique innovation in specific programs?
2. How do we identify appropriate conditions for sharing databases?
3. How does ITAC effectively communicate policy/guidelines and issues to the enterprise?
4. How does ITAC define and maintain a clear vision of collaboration which we support with appropriate rewards?

Public Access

1. How do we maintain the confidentiality of information on public databases?
2. What information should be free and what information should government charge for?
3. How do we make it easier for the public to access information they want?
4. How do we improve government services by electronic means?

Infrastructure

1. What is the role of government in infrastructure development?
2. What is the impact of high speed bandwidth on existing IT resources?

Measuring Success

1. For each ITAC issue, what are the indicators and techniques for measuring success?
2. How do we measure stakeholder/customer satisfaction?
3. How do we know if we are successfully managing the pace of change?
4. What is needed to give us a sense of confidence in our strategies?
5. How do we know that appropriate minimum standards are set that avoid paying for unneeded bells and whistles?

ACTIONS

A detailed overview of the results from the work done on each issue can be found on page 115.

Electronic Commerce

The phrase "electronic commerce" (EC) has been used to describe a number of technologies through the years. One of the earliest forms of EC was electronic data interchange (EDI), which is still widely used today. The automatic teller machine (ATM) arrived on the scene a few decades later, paving the way for electronic banking and electronic funds transfer (EFT). One dictionary definition of EC is:

> "The conducting of business communication and transactions over networks and through computers. As most restrictively defined, electronic commerce is the buying and selling of goods and services, and funds transfer, through digital communications. However, EC also includes all inter-company and intra-company functions (such as marketing, finance, manufacturing, selling, and negotiation) that enable commerce and use (electronic mail, EDI, file transfer, fax, video conferencing, workflow) or interaction with a remote computer.
>
> EC also includes buying and selling over the World Wide Web and the Internet, electronic funds transfer, smart cards, digital cash, and all other ways of doing business over digital networks."

The latest additions to the EC family include secure online transactions and smart cards. Online transactions have received the bulk of the publicity in recent years, due in large part to security concerns on the part of the buying public. The rise of the electronic-only business, personified by virtual bookseller Amazon.com, also has called attention to the secure transaction phenomenon. As a result, many people now associate EC exclusively with the Internet.

TOPICS INVOLVED IN ELECTRONIC COMMERCE

The terms "EC" and "e-commerce" are used to describe EDI and EFT as mentioned above. However, they also describe many other IT topics. The following are some of the varied topics included in the EC issue:

- Electronic Data Interchange (EDI) – Involves the electronic communication of transactions, including orders, confirmations, and invoices, between organizations.
- Electronic Messaging (e-mail) – Refers to electronic mail automatically passed through computer networks and/or via modems over common-carrier lines.
- Electronic Funds Transfer (EFT) – Refers to the movement of payments and payment-related information via EDI.
- Smart Cards – Credit-card sized cards equipped with memory or microprocessor chips that carry information and/or electronic money. Smart cards can be used for payments, security clearances, identification, and various other tasks.
- Electronic/Digital Cash – Refers to various methods that allow a person to purchase goods or services by transmitting a number from one computer to another. The numbers are issued by a bank and represent sums of real money. Unlike credit card transactions, the merchant does not know the identity of the shopper.

- Electronic Bulletin Boards/Electronic Catalogs – Allow the user to either simply view data or to download the data into their own computer and print, manipulate, and/or pass it into their own computer application for processing.
- Interactive Banking – Allowing customers to access their accounts through ATM machines, via telephone networks, and via direct modem links using proprietary bank software. Some banks have taken their business straight to the Internet.

CURRENT USES IN THE STATE OF MONTANA

The State of Montana is currently using EC technology in many differing ways to provide better, more wide-reaching services to citizens. Following are seven major areas of governmental activities where EC is being applied:

- Digital Democracy – The application of EC technology, largely through the Internet, to permit improved citizen access to laws, legislators, and the democratic process. (See page 70 or **http://laws.leg.state.mt.us/law/plsql/LAW0200w$.startup)**
- Higher Education – Utilization of EC technologies, including but not limited to the Internet, for learning and communication, as well as for administrative functions such as applications and student loans. (See page 47 or **http://www.umt.edu/cis/manuals/banner/banner.htm)**
- Elementary and Secondary Education – Utilization of EC technologies to enhance learning opportunities in grades K-12, including availability of computers and online access to the Internet. (See page 80 or **http://www.metnet.state.mt.us)**
- Business Regulation – Availability of regulations, forms, online assistance and/or the ability to actually submit required "paperwork" using the Internet or in EC form. (See page 8 or **http://www.state.mt.us/onestop)**
- Revenue and Taxation – Use of EC technologies to store and retrieve taxpayer information, and/or the ability for taxpayers to obtain information, submit returns, or communicate with revenue authorities online. (See page 90 or **http://www.state.mt.us/revenue/rev.htm)**
- Social Services – Application of technologies such as electronic benefits transfer and smart cards for benefits delivery, and/or the availability of online information regarding program eligibility and application. (See page 82 or **http://www.dphhs.state.mt.us)**
- Law Enforcement and the Courts – Utilization of EC technologies by the judicial system, including online access to court opinions, use of digital communications by police agencies, and the presence or absence of "digital signature" capability for contracts and filings. (See page 64)

BENEFITS OF USING EC TECHNOLOGY

EC technology has the potential to make it easier for governments to achieve the level of automation and savings enjoyed by many private-sector companies who use EC. Government departments will reap many benefits after the move to EC, including:

- Reduced processing costs with online ordering, payment, and fulfillment
- More effective delivery of services to citizens (kiosks, bulletin boards, electronic benefits transfer)
- Customer self-service with 24-hour availability on many services
- Personalized customer information
- A wider selection of products and services
- Transaction integrity and authenticity
- Improved revenue activities (electronic tax payment)
- Decreased administration costs (including less paperwork)
- New marketing and distribution channels

CURRENT CONTRACTS

The Departments of Revenue and Transportation have entered into contracts with the Sterling Commerce Corporation to provide electronic data interchange (transfer) software and services. The Department of Revenue is using Sterling Commerce software to create systems to support the movement of wage-based data between the State and the Internal Revenue Service. The Department of Transportation is using Sterling Commerce software to create a system for the collection and dissemination of fuel tax data. These contracts and systems are the beginning in the state's movement toward large-scale electronic commerce applications. Plans are being made by these departments to support EDI transactions for the enterprise by serving the EDI needs of other state agencies.

LEGISLATION

During 1998, the Information Technology Advisory Council (ITAC) created the Electronic Commerce Subcommittee. This Subcommittee was tasked with researching this wide-ranging topic and determining if any action by ITAC was necessary. The Subcommittee determined that the first step the State should take was to draft and support legislation to enable all state agencies to incorporate EC technology in their business processes.

The draft legislation was developed by the Subcommittee and presented to ITAC. It was then given to the Office of the Secretary of State for further development. The purpose of the legislation is to enable agencies to accept electronic transactions, create uniform definitions of key terms, and create the legal authority for the Secretary of State to regulate certification authorities (digital signature disseminators).

CONCLUSION

As we move to and beyond the end of the millennium, EC technologies will play an increasing role in private sector and government activities. The State of Montana will continue to offer more services using EC technologies. This use will help Montana citizens and businesses interact with the State in a more efficient and effective manner by reducing paperwork, increasing customer interaction with systems, and increasing the quality and amount of information disseminated to the public.

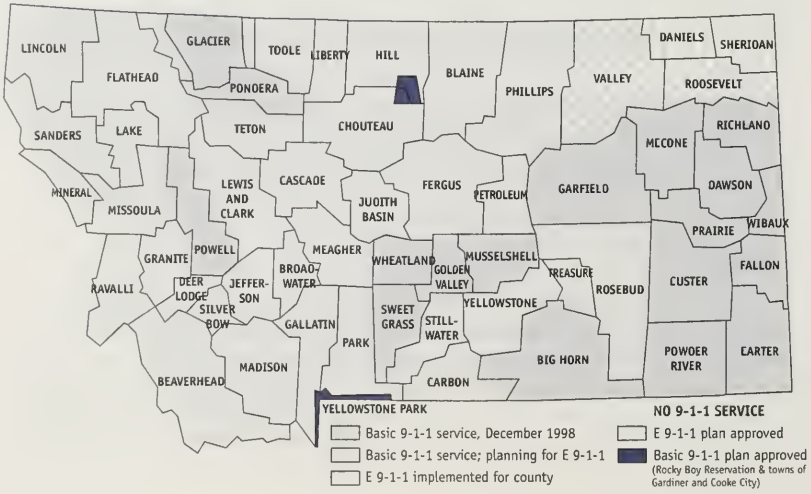
9-1-1

http://www.state.mt.us/isd/groups/9-1-1

Basic 9-1-1 is a community emergency telephone service that automatically connects a person dialing the digits 9-1-1 to an established public safety answering point (PSAP). Basic 9-1-1 service requires: a 24-hour communications facility automatically accessible anywhere in the 9-1-1 jurisdiction's service area by dialing 9-1-1; direct dispatch of public and private safety services in the 9-1-1 jurisdiction or relay or transfer of 9-1-1 calls to an appropriate public or private safety agency; and a 24-hour communications facility equipped with at least two trunk-hunting local access circuits provided by the local telephone company's central office.

Enhanced 9-1-1 (E9-1-1) systems meet the requirements for basic 9-1-1 service, but also use sophisticated telecommunications technology to automatically display a caller's address on a computer screen in the communications center when a call is answered. Also displayed is the caller's telephone number, which can be automatically redialed if the line is disconnected. The telephone number display is called automatic number identification (ANI) and the location information display is called automatic location identification (ALI). In addition, the third component of E9-1-1 service, selective routing, uses a caller's address, not telephone exchange, to direct a call to the appropriate call-answering center. This contrasts with basic 9-1-1 service, which may route the call to an answering center not capable of dispatching emergency assistance to the caller's location.

Montana 9-1-1 / E 9-1-1 Status



9-1-1 JURISDICTIONS

Montana has 59 9-1-1 jurisdictions. There is 9-1-1 service available to approximately 98% of the state's population. Prior to additional funding for E9-1-1 becoming available, most of the state's 9-1-1 jurisdictions provided basic 9-1-1 service only. A few jurisdictions had ANI displaying the telephone number of the calling party, but only the greater Billings area had E9-1-1 that also provided ALI.

As of October 1998, 40 of Montana's 9-1-1 jurisdictions started planning for E9-1-1. Two counties, Sheridan County and Daniels County, have implemented E9-1-1 systems. Valley County and the Roosevelt County/Fort Peck Tribe 9-1-1 jurisdictions currently do not have 9-1-1 service, but plan to implement E9-1-1 systems by the end of 1998 or early in 1999.

In addition to Valley and Roosevelt Counties, the last areas of Montana to acquire 9-1-1 service, the Rocky Boy's Indian Reservation near Havre and the town of Cooke City at the edge of Yellowstone Park, plan to implement basic 9-1-1 systems by the end of 1998. Once the two new E9-1-1 systems and the two new basic 9-1-1 systems are in place, Montana will join 15 other states and the District of Columbia with statewide 9-1-1 service.

FUNDING

Funding for the implementation and operation of basic 9-1-1 systems is generated through a monthly 25¢ fee on each telephone subscriber's access line, with some exceptions for non-taxable entities. The funds collected are allocated to local governments on a per capita basis after program administration costs have been deducted. During the 1997 Legislative Session, the monthly fee for 9-1-1 was increased to 50¢ per access line, with the additional 25¢ providing funding for E9-1-1.

E9-1-1 PLANNING ACTIVITIES

Each local 9-1-1 jurisdiction will receive its share of the E9-1-1 fund once the E9-1-1 plan has been submitted to and approved by the Department of Administration.

To assist local jurisdictions with E9-1-1 planning, the 9-1-1 Program Office has compiled, published, and distributed *The E9-1-1 Coordinator's Handbook* to all local governments and all 9-1-1 jurisdictions in Montana.

Current E9-1-1 Status includes:

- E9-1-1 plans approved: Sheridan, Daniels, and Valley Counties, and the Roosevelt County/Fort Peck Tribe 9-1-1 jurisdiction
- E9-1-1 plans submitted for review: Butte/Silverbow and Mineral Counties
- E9-1-1 plans almost complete and being reviewed by local agencies: Beaverhead, Glacier, Granite, Lake, Lewis and Clark, Madison, Meagher, Missoula, Ravalli, Sanders, Stillwater, Teton and Toole Counties

- Jurisdiction has signed contract with telephone service providers for E9-1-1 database construction and is working on the E9-1-1 plan: Carbon, Cascade, Gallatin, Jefferson, Park and Yellowstone Counties and the town of Ronan
- Jurisdiction has held one or more E9-1-1 planning meetings and requested E9-1-1 costs from their telephone service providers: Anaconda/Deer Lodge, Blaine, Broadwater, Choteau, Flathead, Hill, Liberty, and Phillips Counties, the City of Lewistown, and the Tri-County 9-1-1 jurisdiction (Fergus/Petroleum/Judith Basin)
- Jurisdiction has held one or more E9-1-1 planning meeting(s): Lincoln County, Troy, Eureka, and the Rosebud/Treasure County 9-1-1 jurisdiction

The remaining jurisdictions have decided to implement other equipment upgrades and/or finish rural and municipal addressing before starting the E9-1-1 planning process.

OTHER E9-1-1 ACTIVITIES

Rural and Municipal Addressing – To gain the full benefits of E9-1-1, each telephone number must be linked to a physical address so the 9-1-1 caller's location can be displayed at the PSAP and the caller can be located by emergency service providers.

Creating physical addresses requires naming all roads, including private roads, with unique names and assigning numbers consistently to all properties. Once the road names and property numbers are assigned and adopted by the community, the new physical addresses can be used for 9-1-1 services, mail delivery, utility services, delivery services, and others.

The 9-1-1 Program Office, in conjunction with ISD's GIS Services and Coordination Section, has developed a guidebook to assist addressing committees with their addressing efforts. This guidebook, the *Montana Addressing Guidebook for Local Governments*, contains a list of recommended tasks for creating physical addresses and was distributed to all cities, counties, and 9-1-1 jurisdictions in Montana.

Wireless Enhanced 9-1-1 – In addition to preparing for E9-1-1 from wireline telephone service providers, 9-1-1 centers must prepare for wireless E9-1-1, which requires different technology for delivering the E9-1-1 information. FCC Rules (Docket 94-102) require cellular carriers to implement E9-1-1 service in two phases. Phase I, which requires wireless carriers to deliver, after April 1998 and within 6 months of receiving a request for the information, a call-back number and the cell site or cell sector relaying the 9-1-1 call. For Phase II, available by October 2001, the wireless carrier must provide a callback number and the location of the calling telephone within 125 meters and be accurate 67% of the time.

CONCLUSION

Montana citizens expect to have 9-1-1 service available in every community, just as they expect medical services and fire and law enforcement protection. In addition, the public expects efficient service provided by professional, well-trained dispatchers, working with state-of-the-art enhanced 9-1-1 computer equipment. The State is very close to reaching our primary goal of statewide 9-1-1 coverage.

Imaging

http://www.state.mt.us/isd/planning/it_init/imag_doc/index.htm

Document Management is defined as keeping track of stored documents that have been scanned into a computer file or created using a word processor, spreadsheet, or other application. Imaging is defined as the online storage, retrieval, and management of electronic images of documents. The main method of capturing images is by scanning paper documents. Electronic Document Management and Imaging Systems allow users to input a document using Optical Character Recognition (OCR) software and a scanner to create a digital file of the document. This file can be archived just like the paper would be saved in a file cabinet. Image management software will allow the user to index the document using key words that will allow them to find it faster when it is needed. Storing documents as digital images greatly reduces the floor space requirements for storage. The power of an imaging system to manage paper can be appreciated by considering that one 5.25-inch optical disk can store about 320,000 documents, equivalent to the storage capacity of 27 four-drawer filing cabinets. The process of inputting and saving the document files is as labor intensive as using real paper, but time and effort is saved in retrieving these documents.

Document management and imaging, an already fast-moving technology, has burst to the forefront over the last two years. Imaging systems are now feasible because of drastic drops in storage costs and the advancement of storage media, such as optical disks and rewritable CDs. Government agencies increasingly are turning to imaging as a way to efficiently manage documents, reduce costs and increase productivity. The State of Montana has stayed abreast of this technology and is in a good position to take advantage of the benefits that it has to offer. This has been accomplished primarily due to the work of the ITMC Imaging Subcommittee.

ITMC IMAGING SUBCOMMITTEE

The Imaging Subcommittee was formed by the Information Technology Managers Council (ITMC) and is comprised of representatives from many agencies. The Subcommittee's goals include the following:

- Develop a plan for implementing approved document management and imaging technology
- Develop, publish, and implement imaging standards for the State of Montana
- Plan a centralized imaging service for state agencies
- Continue to develop expertise and stay abreast of current imaging and document management technology in order to provide direction for state agencies wishing to use the technology

STATE STANDARDS

The ITMC Imaging Subcommittee developed and published the document *State of Mantana Electronic Imaging Standards.* The standards and recommendations in the document are consistent with recognized industry standards and policies. The document, adopted by ITMC and the Information Technology Advisory Council (ITAC) in July 1996, addresses the management and technical issues of imaging. Some examples of these issues are legal considerations, retention schedules, security, storage media selection, and indexing. The document provides a platform for future imaging and data compatibility between systems installed by agencies, and emphasizes planning and coordination to minimize legal and practical risks associated with new systems. ISD, in consultation with the Subcommittee, uses this document to facilitate the approval process for procurement of imaging hardware, software, and services.

IMAGING AND DOCUMENT MANAGEMENT PARTNER

In order to facilitate the development and implementation of imaging systems for state agencies, the ITMC Imaging Subcommittee determined the State needed an imaging partner and standard software. A Request for Proposal (RFP) was issued and awarded to KPMG-Peat Marwick partnering with FileNet. The contract with KPMG has been in place since July 1997. Currently, there are three imaging systems in place using FileNet software and FileNet is the software of choice for the centralized imaging service.

CENTRALIZED IMAGING SERVICE

The ITMC Imaging Subcommittee has been working to develop a plan for a centralized imaging service for use by all state agencies. Many agencies cannot justify the cost of having their own system. Some imaging projects may become economically feasible when combined with other projects in a centralized system. The service would include an online server and storage device that would provide document management capabilities and access to stored images. The service would also have a backlog conversion system where agencies can convert their paper, microfiche, or microfilm documents to an electronic format. These documents would then be stored on various media, including magnetic, optical, or CD-ROM. The system is designed to be scalable and capable of growing with future demand.

CONCLUSION

At the time of publishing, the decision to establish a centralized imaging service had not yet been made. Regardless of the direction of the centralized imaging service, imaging technology will continue to be more prevalent throughout the State. As this technology grows and becomes more cost effective, it will become increasingly beneficial for the State of Montana.

Desktop Suite Conversion

During the 1998-1999 biennium the State was at a decision point regarding the strategic direction of standards for desktop software. There were many factors influencing reassessment of the desktop standards, but three main issues stood out. The first was the importance of moving to a 32-bit desktop software solution to better use the latest technology and the state's standard operating system, Microsoft Windows 95 (a 32-bit operating system). A second factor was MT PRRIME and the integration the software, PeopleSoft, has with desktop software. The third issue was the need to move to a new e-mail/GroupWare system and the integration e-mail/GroupWare systems have with desktop software.

The decision was whether to continue with a best-of-breed software solution or move to a software suite. The State traditionally selected software by identifying the best product to meet the needs of the State at the time of selection. This process is commonly referred to as selecting best-of-breed applications. The other option when purchasing desktop software is to select a software suite. A software suite is a set of applications integrated and bundled together and sold as a package. Individual applications such as word processors, spreadsheets and presentation graphics are being replaced by suite applications that are tightly integrated bundles of these core applications. In many cases, the suites provide additional functionality such as personal information management, e-mail and web access.

ACTIVITIES

ISD prepared an analysis of desktop software and presented a report with recommendations to the Information Technology Managers Council (ITMC) and the Information Technology Advisory Council (ITAC). The result of the process was the selection of a software suite as the strategic direction for the State. A Request for Proposal (RFP) for a software suite was issued and the award went to Microsoft Corporation for Microsoft Office and Microsoft Exchange.

THE CONVERSION

The change in desktop software is a significant undertaking for information technology staff in all agencies. It involves installation time, training time, and support during the transition. Most agencies concentrated their initial efforts on converting their MT PRRIME users.

CONCLUSION

The funding for Microsoft Office Standard Edition for all computers attached to the state network (SummitNet) for the 1998-1999 biennium was provided through the ISD monthly data network rate. This allowed for a more rapid conversion schedule than initially projected. Once the conversion effort is complete the full benefits of a desktop software suite will start to be realized. The full report, *Desktop Software Strategic Planning*, is available from ISD.

Electronic Mail (Microsoft Exchange) Project

http://www.state.mt.us/isd/planning/IT_INIT/email/vision.htm

In August 1995, the State began to address the future of the enterprise electronic mail (e-mail) solution. The need for a new direction became evident due to three main factors: discontinued support of the ZIP!Mail/ZIP!Office products by the Attachmate Corporation, the deployment of the SummitNet TCP/IP network statewide, and the development of wide area network-based client/server e-mail solutions.

The Information Technology Managers Council (ITMC) formed a Subcommittee to study the issues, the emerging technologies, and make recommendations about e-mail standards. As a result of the Subcommittee's efforts, a Request for Proposal (RFP) was issued in 1997.

No award was made as a result of the 1997 RFP because of a parallel direction change in the State's desktop software direction. The strategic direction for desktop software was changed to a software suite that included e-mail. The e-mail procurement was then included with the desktop software suite procurement to provide one integrated solution.

The desktop software suite RFP award went to Microsoft Corporation for Microsoft Office and Microsoft Exchange for the e-mail application.

NEW STANDARD

The new enterprise e-mail standard is Microsoft Exchange. The client (software running on the desktop) is called Microsoft Outlook and is part of Microsoft Office. In February 1998, ISD formed the E-mail Implementation Team with members from within ISD as well as agency representation.

VISION

The E-mail Implementation Team developed and received approval for its vision and scope statements. The vision statement is:

> "The State of Montana will establish the foundation for a mission critical messaging system enabling effective electronic business communication."

The focus of the initial release of Microsoft Exchange will be on desktops running a 32-bit Windows operating system. During the conversion, the system will communicate with legacy e-mail systems. The system will provide improved functionality and ensure no loss of current capabilities.

SCOPE

Highlights of the scope statements developed by the Team are:

- Initial release of the messaging system will be completed by July 1999
- Initial release will include a uniform deployment of the Outlook client that provides e-mail, calendaring, and group scheduling – GroupWare, workflow, fax, and imaging will follow in the next phase
- Mail delivery will be ensured between Microsoft Exchange and all legacy e-mail systems (ZIP!, EMC/TAO, VMS, Internet)
- ISD will initially purchase, own, and manage the Exchange server infrastructure
- End-user training costs will be recovered through the data network connectivity rate and agency support staff will receive additional training
- Support will be provided for remote dialup, mobile and roaming users

CONCLUSION

Full agency deployment began in October 1998. All agencies will be converted to the new Microsoft Exchange/Outlook electronic mail system by June 1999. Communication between state agencies, local governments and the citizens of Montana will be much improved with Microsoft Exchange.

Network Security

http://www.state.mt.us/isd/policies/policies.htm

Security, simply defined, is "freedom from danger or risk of loss; safety." Network security can be defined as any effort made to protect a computer network from danger or risk of loss making the network safe from errors, intruders, and other threats. There are three basic categories for network security threats. They are:

1. Human error on the part of authorized network users including accessing areas and viewing confidential data, as well as inside attacks from disgruntled employees.
2. Intentional sabotage from external sources, such as hackers from the Internet and computer viruses.
3. Natural disasters such as hurricanes, floods, fires, earthquakes and other non-human threats, such as hardware failures, power outages, and electrical brownouts.

Information technology resources in the State of Montana consist of data, applications, and the physical infrastructure of the computer systems. These resources are valuable State assets because they are used by state agencies for providing more efficient and cost effective services. They must be protected from the threats identified above while being made readily accessible by authorized individuals. Specific security measures have been implemented to address these types of network security threats.

SECURITY THREATS

Adopting adequate computer security policy easily prevents the first threat, human error. Over the last two years the following policies have been adopted: Logging On and Off the Network, UserID, Password and Access, and User Responsibilities. These policies help guide employees as they use the state's computer systems to ensure proper procedures are followed to protect the state's electronic information. User education is also important. A monthly computer security class has been established to provide state employees with needed information regarding computer security. Another item that has been established to address this threat is the implementation of auditing and network analysis software. The network is monitored on a continuous basis for inappropriate access.

The second threat, intentional sabotage from external sources, can be dealt with in many ways. Fileservers have been physically secured in areas accessed only by authorized employees. Network monitoring of intruder detection has also been implemented. Virus software has been purchased to protect the state's data from destruction by unwanted virus attacks. Policies have also been established for Computer Virus Detection and Prevention, Internet/Intranet Security, and Network and File Server Security.

The third threat, natural disasters, has also been addressed. The State has purchased backup software to be used within the network. A disaster recovery plan is also being implemented. Uninterruptible power supplies (UPS) are being used as backup power sources in case of a power outage. Policies have also been established for Server Maintenance, LAN Backup and Archiving, and Internet Services.

The enterprise statutes and policies can be found on the ISD web site at **http://www.state.mt.us/isd/policies.**

CONCLUSION

Future expectations for network security involve the use of encryption for confidential data and possibly establishing a Virtual Private Network (VPN) at integral points throughout the wide area network (WAN). A VPN establishes a secure link between two points on a computer network so that confidential data may be securely sent between the two points. Continuation of the protection of the state's data and network resources while allowing other networks to connect to the State such as local governments and contractors is another important element. The future of the state's network relies on these external connections to make the exchange of data easier.

State agencies are also beginning to be involved with electronic commerce. Certificates of authority and digital signatures are an integral part of this kind of technology and the security measures needed to maintain this type of information is very important.

The goal of ISD is to maintain a secure network while allowing employees, as well as the public, access to information they need.

Disaster Recovery

http://www.state.mt.us/isd/planning/disaster

Disaster recovery planning is the ability to respond to an interruption in services by implementing a plan to restore an organization's critical business functions. This includes the state's data center, network, mainframe, and stand-alone hardware.

PURPOSE OF PLANNING

The major purpose for disaster recovery planning is to balance the risks of having a major disaster with the costs of preparing for and recovering from one. Agencies must evaluate the risks, the costs, and the funding available for those costs. They must also consider what the consequences would be for failing to act (for example, over 200 businesses never recovered from the World Trade Center bombing). It is important to realize the legal ramifications, both criminal and personal. What would the business impacts be? Can the business survive? Will it be able to continue normal business functions in a reasonable length of time (e.g. 48 hours for critical functions and systems)? The goal is to provide enough insurance to recover from a major disaster without spending so much that you cannot afford to continue business operations.

DISASTER RECOVERY AT THE STATE OF MONTANA

The State of Montana has made great strides in its disaster recovery planning and testing efforts over the last several years. The State is in a good position to be prepared to restore the System A mainframe and also recover the AS/400 processors located at the Departments of Revenue and Corrections.

FUTURE DRILLS AND EFFORTS

The next disaster recovery drill is scheduled for May 1999 at the hot site facility in Federal Way, Washington. The focus of the drill will be the recovery of the mainframe with its new operating system, the mid-tier platforms, and limited recovery of LAN and WAN functionality, including establishing a connection between the hot site and Helena.

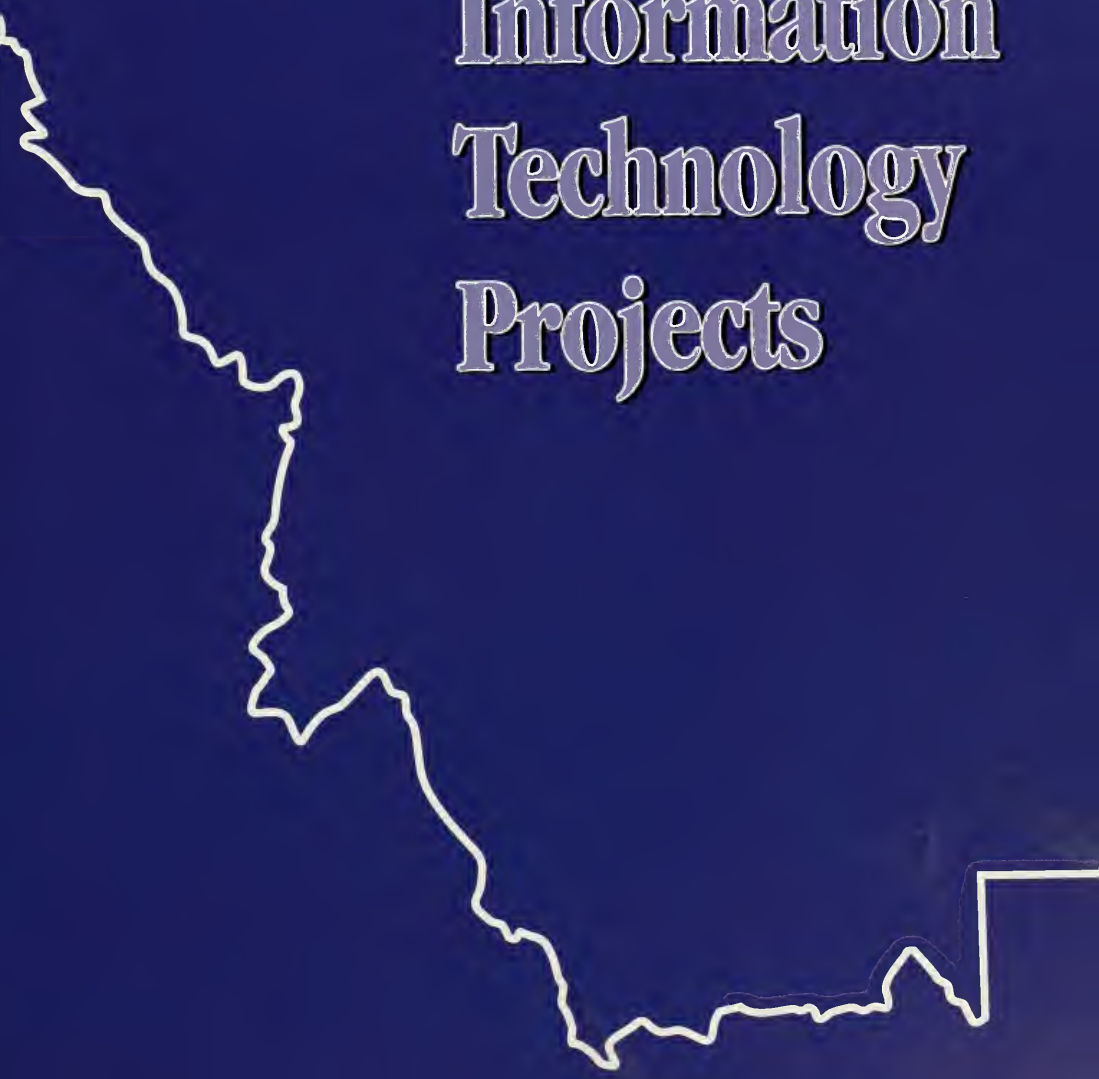
Future testing will include expanded network and mid-tier tests. Future efforts also include a prioritization of the systems to be recovered, coordination of individual agency LAN recovery plans, and business continuity planning development and testing.

CONCLUSION

ISD has been working diligently on the State of Montana computer systems disaster recovery planning needs. ISD continues to oversee the development and testing of its disaster recovery plans and provides assistance to agencies in the development of their individual disaster recovery plans.

ISD's role in disaster recovery is to provide the facility, personnel, and equipment necessary to run critical agency applications in the event of a major disaster. To date, ISD and agency staffs have completed numerous successful drills, proving the ability to recover the State's data center at the hot site facility.

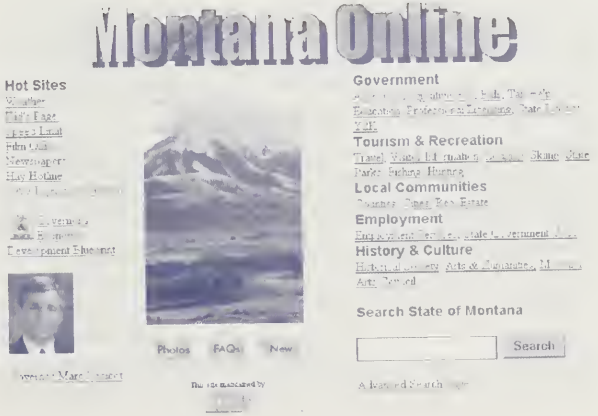
Agency Information Technology Projects



Agency Information Technology Projects

This section presents the state of information technology for each agency in state government. The information in this section covers agency accomplishments, ongoing projects, and future directions.

State agencies use information technology (IT) for streamlining internal processes and for providing efficient, cost effective, and appropriate public services and educational opportunities. Each agency is responsible for establishing its own IT goals, objectives, and plans. To ensure network and statewide IT strategic plan conformance, agencies work with the Information Services Division of the Department of Administration when procuring hardware, software, and private-sector services.



Visit Montana Online at **http://www.state.mt.us**

MONTANA ONLINE – STATE GOVERNMENT ON THE WORLD WIDE WEB

Montana Online, Montana's homepage on the Internet, is a great way to find out more information about Montana. The homepage emphasizes government information and there are many links to Montana information (such as weather) that are more general.

More than 27 agencies are accessible through Montana Online, as are universities and K-12 schools. The web page is also a great source of travel and tourism information. There is a direct link to legislative information from the Montana Online homepage. A Montana photo gallery and search capabilities were recently added.

Here is a list of just some of the government information accessible via the Internet and Montana Online:

- Tax help
- 1999 Legislative Session information
- Professional licensing
- Year 2000 compliance
- Purchasing bids
- Job openings
- Public assistance
- State parks
- MT PRRIME
- Governor's budget
- Local government web pages

Department of Administration

http://www.state.mt.us/doa

1998-1999 BIENNIUM PROJECTS

- The largest IT project for the Department is the Project to Reengineer the Revenue and Information Management Environment (MT PRRIME). MT PRRIME involves replacing the state's core financial, human resources and asset management systems. For more information, see MT PRRIME on page 6 or **http://www.state.mt.us/doa/mt_prrime/montpri.htm.**
- The Department focused a great deal of resources on providing information to other state agencies and the public through electronic means. To accomplish this, a large amount of information is disseminated through the Department's Internet web site, such as bid proposals, personnel policies, and additional information. Other information is loaded on the State Library's Folio server (**http://statedocs.msl.state.mt.us**) and made available with other agencies' documents.
- The Department centralized network and desktop support. Two staff members support over 150 users and five network servers located throughout Helena. Centralization allows the support staff to be more efficient and responsive.
- The Department implemented the Purchasing Accounting Reporting Information System (PARIS), a program designed to allow agencies the ability to make small purchases, currently defined as $5,000 or less per transaction, using a purchasing card (MasterCard). The intent is to increase efficiency by eliminating manual steps and costly paperwork required to make small purchases. As a positive by-product of the program, the State can:
  - Reduce the amount and number of petty cash funds
  - Better identify the actual cost to make such purchases
  - Reduce the audits and administration of small purchases
  - Enhance the reporting of purchases made

  For more information see **http://www.state.mt.us/doa/paris/paris.htm.**
- The Department continued to expand the Montana Public Vehicle Fueling Program in order to offer a convenient, cost-effective means for fueling government vehicles. The fueling program, through a network of government and commercial fueling sites, assists state agencies in tracking and controlling fuel costs through the use of monthly comprehensive fuel management reports. The accounting and transaction processing functions associated with vehicle fueling are automated. In addition, it offers a system of security and maintains the integrity of the Department's tax exemption status for transactions anywhere on the fueling network.

  The fueling network consists of 218 sites in 106 Montana cities, and will increase to 1000 sites by the end of the biennium. By using this program, the Department of Transportation is saved the manual input of approximately 7000 transactions a month. Other statistics of the system include:

- 7500 cards in place in the field
- 240 individual agency accounts
- 500,000 transactions have been processed since the inception of the program.

For more information see **http://www.state.mt.us/doa/ppd/fuelprog.htm.**

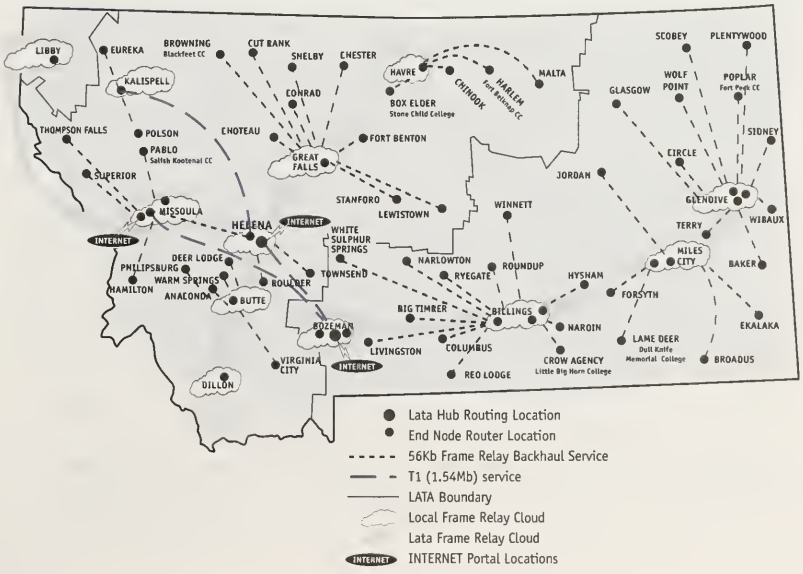
- The Department's Personnel Division participates in the Montana Job Source by making job announcements available to the public through the Montana Job Source Internet site. The Personnel Division additionally disseminates employee benefits information through the Folio information server located at the State Library. For more information see **http://doaisd503.state.mt.us/mjs/owa/mjs0010w$.startup.**

Information Services Division (ISD)

- SummitNet is an acronym for "State and Universities of Montana Multi-Protocol Network". It is the state's telecommunications network across Montana. State agencies, libraries, local governments, K-12 schools, tribal colleges, and universities all have access to SummitNet. SummitNet allows for telecommunications between all of these organizations statewide.

  ISD has extended the capitol-complex fiber-optic backbone (the local-area network or LAN) to serve 14 buildings. This backbone handles LAN traffic and will eventually serve voice and video needs. It is anticipated that the fiber-optic backbone will provide agencies with a single high-speed LAN capable of meeting LAN connectivity needs for at least 10 years. During the next five years, LAN traffic will continue to increase as agencies connect approximately 500 to 1000 computers per year to the existing installed base.

SummitNet Map

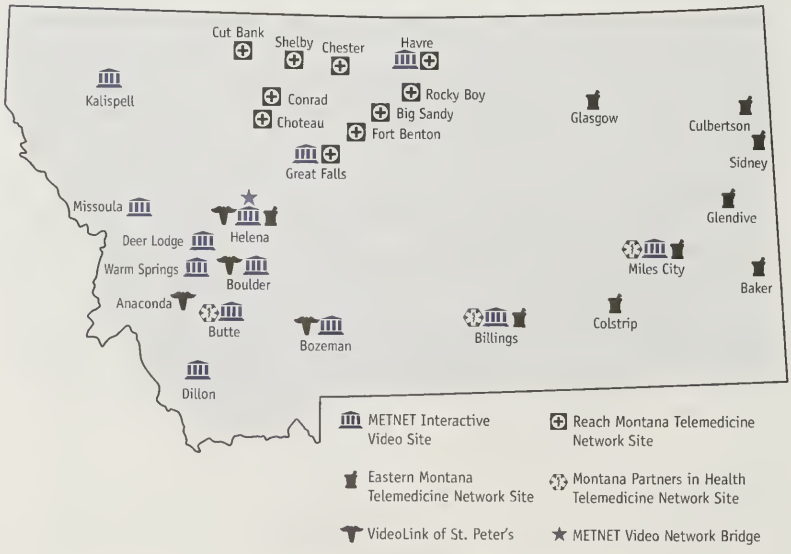


- The Montana Educational Telecommunications NETwork Interactive Video System (METNET) consists of 18 video conference room sites at university or state agency locations in 12 Montana cities (Billings, Boulder, Bozeman, Butte, Deer Lodge, Dillon, Great Falls, Havre, Helena, Kalispell, Miles City, Missoula, and Warm Springs). These sites use compressed video room systems, H.320 standards based, operating on a dialup switched 56Kbps digital network, capable of rates from 56 to 1544 kbps. All of the state's video and telecommunications networks are installed and maintained by WilTel Communications Systems, Inc.

  The State also participates in alliances with other video conference systems in Montana, increasing our "reach" to some 25 other locations in Montana. The State routinely does video conferences to out-of-state locations, both nationally and internationally, using AT&T and SPRINT digital telecom services.

  State statute limits the use of the interactive video network to official state business, including university classes, pre-approved non profit corporations (while doing business for or on behalf of a state agency), and other officially approved uses. Currently, educational use accounts for about 57% of the activity on the video conference network, which averages more than 100 conferences and 250 hours per month. All scheduling, training, billing, and informational activities for METNET interactive video conferencing is done internally by ISD staff. The METNET sites not located in Helena train and schedule support technicians who run the equipment. For more information see **http://www.state.mt.us/isd/metnet**.

METNET Map



- ISD implemented a new problem tracking system called Peregrine's Service Center. All user support staff in the division use the new system. It has the ability to assign priorities to problems and automatically escalate unresolved problems. It also has the ability to identify and quantify repetitive problems, giving ISD the opportunity to solve problems with long-term, enterprise solutions, rather than solving each problem individually. Service Center replaced IBM's INFOMAN.

Peregrine's Service Center – ISD's problem tracking system

- ISD supports a multi-platform application environment with strong expertise in legacy systems and Oracle database. The portfolio of tools used to support development in the Oracle environment continue to be enhanced.

  Oracle 2000 Designer and Developer licenses have been acquired and Oracle training is being provided at the Helena College of Technology and through the "Oracle Channel". Approximately 40 new Designer/Developer tool sets were acquired in FY98 and another 30 are anticipated in FY99. Support was purchased for 90 existing tool sets in FY98 and the full portfolio of 130 in FY99. In FY98 over 300 students participated in Oracle Channel Sessions and 150 students attended 16 classes at the Helena College of Technology. The Oracle Channel will be provided again in FY99 as well as Oracle education at the Helena College of Technology.

  Capabilities to access Oracle repositories on mid-tier systems from the mainframe and to access mainframe files from the mid-tier have been implemented.

- Additional Oracle programmers were hired. As a result, ISD provided a core technical team for MT PRRIME, while continuing to support production application systems and manage Year 2000 compliance for the production systems.

- Staff was hired to provide services to support smaller agencies and to assist agencies with LAN Administration on a fee for service basis. Customers were Military Affairs, Fish, Wildlife, & Parks, Labor, Historical Society, Consumer Counsel, Political Practice, Revenue, and Administration (MT PRRIME).

- OS/390 is IBM's new release of MVS/ESA for the mainframe and was put into production by ISD in September 1997. It is Year 2000 compliant and offers many new features to users. Some of the new features are a new C++ compiler, IBM's Bookmanager for access to IBM manuals on the mainframe, the BINDER, and ISPF Version 4.

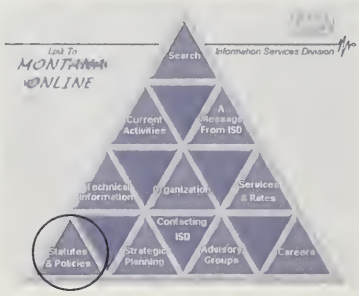
- ISD purchased and implemented a new mainframe disk storage system called the RAMAC Virtual Array 2 Turbo storage subsystem, referred to as RVA. The majority of the 3390 DASD was replaced with RVA. All production data was migrated over to this new device.

- ISD's voice communications provides telephone service to all agency sites throughout Montana. In cooperation with the University System and state agencies, ISD manages Private Branch Exchanges (PBXs) at 23 sites (including six in Helena and eight at the University units) and smaller key telephone systems at more than 200 locations statewide. These 23 PBXs are connected through the STN facilities, allowing the State to carry most of its internal traffic on the network without incurring incremental long-distance charges.

  The STN provides local and long-distance calling capabilities for agencies throughout the state. ISD maintains contracts with AT&T, Sprint, and US West for intrastate, interstate and international calling. This provides the state with substantial long-distance savings on calls made from state facilities or with a state credit card. During the next five years, the State will continue to contract for local and long-distance circuits to meet the increased demand for voice, data and video communications.

  The State began the active management of telephone systems in 1982 when it acquired its first PBX. Since that time, 23 additional PBXs, which manage more than 17,000 telephones, have been purchased. These PBXs provide on-campus and local calling services, and give access to communications, dial-in data calling, voice mail features, access for telecommunications devices for the deaf, and operator services. The state's PBXs provide management for: telephone, limited WAN, SNA, SummitNet data-circuit, and METNET video-image services. During the next five years, the State will continue to upgrade PBXs to improve service capabilities and achieve telecommunication cost savings.

- ISD worked with the Information Technology Managers Council (ITMC) and the Information Technology Advisory Council (ITAC) to adopt several information technology enterprise wide policies. All information technology policies can be found at **http://www.state.mt.us/isd/policies.**



http://www.state.mt.us/isd/policies
ISD's web site – The front door to enterprise wide policies

- ISD worked on a great deal of other IT projects during the biennium. For more information, see Enterprise Topics on pages 1-32.
  - Year 2000
  - MT PRRIME
  - Public Safety Communications
  - Telecommunications Network Research
  - Geographic Information Systems
  - Electronic Commerce
  - 9-1-1
  - Imaging
  - Desktop Suite Conversion
  - Network Security
  - Disaster Recovery

FUTURE DIRECTIONS

- In the 2000-2001 biennium, the Department will create an Intranet site to electronically provide interactive information such as vendor lists and Department manuals to personnel throughout the Department.
- The Department will work with other departments to assist in implementing the additional MT PRRIME modules and importing their information into the MT PRRIME System.

Information Services Division (ISD)

- Pilot Project on Distributed IT Resources – Equal access and availability of support personnel to every state agency has previously been identified as a beneficial goal for the enterprise. Strong support was given by ITAC to move forward with a pilot project to consolidate the provision of IT resources at remote locations. As envisioned, IT support personnel working within a designated region would be dispatched from a central location. The dispatch schedule would be available to all participating agencies so everyone could take advantage of a support person going to a remote location. The project has the potential of providing both agencies and their affected publics with better service than agencies could provide on their own.
- Central Administration and Funding of Desktop Software – There is a proposal for the central administration and funding of standard desktop suite software (Microsoft Office Standard), recommending a two year version upgrade cycle that would be funded by the data network rate.
- SummitNet Growth – This requires new hardware, circuits, and support for the State's local and wide area data networks. The state will need to expand the current network, add additional bandwidth at existing sites, and support new applications to be developed for the delivery of services by state agencies.
- Data Network Security Tools – ISD will be looking to provide more appropriate levels of network security including virus scan software to the desktop, encryption, and Internet firewall protection. This proposal includes implementation of firewall and encryption software in various points throughout the network to protect critical applications and sensitive data files.
- Database Growth – As Oracle database and enterprise applications are deployed there will be an increased need for reporting tools for the desktop.

- Network Operating System Support and Management – It is important to increase the support and provide direction for the State's data network operating systems.
- Telephone Management System – It is planned to replace the current telephone management system. The current system, purchased in 1987, is no longer supported by the vendor and does not provide the functionality needed by the state and university users. This replacement includes hardware and software.
- METNET Upgrades and Support – There are plans to upgrade the state's compressed video systems throughout the network to the latest software and hardware, and to provide adequate levels of FTE support.
- Enterprise Mid-Tier Computer Support – It is necessary to expand the mid-tier computer production processing capability and capacity. This expansion includes computer hardware, software, and personnel necessary to continue to provide shared use mid-tier computer services. This computer configuration is located within ISD's existing computer center, enabling it to take advantage of the center's physical facilities, including conditioned electrical power, physical security, fire detection and suppression systems, technical expertise, and 24 hour, 7 days a week operational support.
- Montana Cadastral Database Project – There is a proposal to provide the funding for the second biennium of the Montana Cadastral Database Project. The goal is to implement a statewide database of cadastral (land parcel ownership) information. The information would be linked with existing parcel information maintained by the Department of Revenue in the Computer Aided Mass Appraisal System (CAMAS) to provide participating organizations with an integrated, statewide database of land ownership data. This database would be used by the Department of Revenue, other state agencies, and local government entities for a wide variety of activities that rely on land parcel information. In addition, federal and private sector organizations would have access to the data because of financial participation in the project. For more information, see Geographic Information Systems on page 14.
- MT PRRIME Operational Support Bureau – This bureau will provide agencies support for the new PeopleSoft and Legacy Solutions Software Systems. For more information, see MT PRRIME on page 6.
- Inter-Governmental IT Coordination Services – This proposal is for IT coordination and support services for local government agencies. The purpose of this service would be to work with local governments to identify opportunities for standardizing technology; coordinate deployment of technology within local governments; use joint contracts for equipment and service purchases and a number of technology-specific services.

Department of Agriculture

http://agr.state.mt.us

1998-1999 BIENNIUM PROJECTS

- Began to convert database systems to Oracle
- Converted the Montana State, Missoula, and Bozeman Grain Laboratory databases to Oracle
- Converted all site networks (except Billings) to NetWare 4.1
- Converted to Windows 95 (except Billings)
- Installed Microsoft Office on all desktops
- Installed a new network in Billings that included the server and wiring
- Performed MT PRRIME interface work
- Involved in the pilot of the new Microsoft Exchange mail system, and has implemented the mail system throughout the Department
- Set up several remote sites to access MT PRRIME through use of the State's WinFrame and the wide area network
- Participated in the One-Stop Business Licensing Project

http://agr.state.mt.us
Department of Agriculture's web site.

FUTURE DIRECTIONS

- In the 2000-2001 biennium the Department of Agriculture will be working on rewriting several database systems in Oracle and on converting many of the DOS applications to Windows equivalent applications.
- In the next three to five years, the Department of Agriculture will be looking into:
  - Publishing information internally and through the Internet using Oracle's web publishing functionality
  - The electronic funds transfer (EFT) pertaining to the crop hail insurance program and the feed, fertilizer, and pesticide registration programs
  - Purchasing and installing GroupWare and the necessary hardware to run it

Board of Education

http://www.montana.edu/~wwwbpe

1998-1999 BIENNIUM PROJECTS

- The Board of Education provided computers for their entire office staff. In order to share computers with the appointed members of the State Board of Public Education (SBPE), the Board of Education began upgrading their computers and allowed the SBPE members to use their old computers. They are doing this to assist members in taking advantage of electronic mail and Internet research capabilities.
- The Board of Education connected their network to the University System network through the Commissioner of Higher Education co-located with them in the Commissioner's building. This allows them to easily share information with the University System.
- The Board of Education created a web site for the office. The staff is in the process of being trained in how to publish information to the web site so that as meetings are held information can be disseminated to Board members and the public. Some of the information included on the web site follows:
  - Information about the Board
  - Meeting minutes, agendas, and committee information
  - Hearing rule changes
  - Office contacts
  - Publications

http://www.montana.edu/~wwwbpe
Board of Education's web site.

ONGOING PROJECTS

- The Board of Education plans to continue to provide computers to Board members until all members have a computer and access to electronic mail and the Internet.

FUTURE DIRECTIONS

- As the Internet grows the Board of Education plans to keep up to pace with it and use its full potential as a research tool. The office also plans to keep its computing technology at a current level to maximize office efficiency. The office staff will continue to strive to learn more about computing technology to make the best purchases for their business needs.

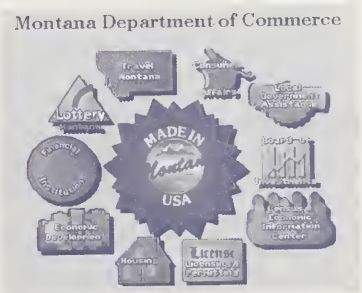
Department of Commerce

http://commerce.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The main Commerce building employees have had their desktop operating systems converted to Microsoft NT 4.0. As new computers are purchased the new operating system is implemented. Employees with older computers are still running dual operating systems of NT/Windows 3.11.
- The Board of Investments converted to Windows 95 because of requirements of central bank systems. The central banks provided the software, installation and setup assistance for their systems and also provided T-1 lines when necessary for the conversion.
- The Internet Professional & Occupational Licensing web site **http://commerce.state.mt.us/License/POL** was created and the first phase, enabling the downloading of licensing forms, was completed.
- The Professional and Occupational Licensing Division (POL) provides information to the general public regarding professional and occupational licenses and the Licensing Boards that govern them. The purpose of the POL web site is to give public access on the Internet to that information.

  Commerce uses the information obtained from the forms submitted for licensing to cross reference names with other state and federal licensing databases in order to check on the history and current licensing status of applicants to protect the public.



http://commerce.state.mt.us
Department of Commerce's web site.

- The Census and Economic Information Center (CEIC) compiled Montana County Statistical Reports which are a collection of demographic and socioeconomic data for the State of Montana and each of its 56 counties. Clients were granted access to statistics encompassing ten broad subject categories for each county and for the State. The reports are updated on a regular basis, as statistics become available. A web site interface was also created to provide Montana and federal demographic and economic information and statistics to the public through the use of customized economic reports and links to national census reports. For more information see **http://commerce.state.mt.us/ceic.**

ONGOING PROJECTS

The Montana Lottery online system.

- The Montana Lottery entered into a contract for a new online lottery system. This was a major conversion of all of the Montana Lottery's PCs, servers, databases, local area network hardware, lottery ticket field terminals, and desktop applications. The vendor of the new system located a central data center in Helena, which was a big advantage over past vendors that located their data center out of state.

  The Montana Lottery also used electronic commerce technology to transfer data from lottery terminals in the field to a central data repository. Information is transferred online, in real time from lottery terminals in the field to the vendor's data center. Funds transfer is performed weekly between the vendor's data center, the Lottery office and the appropriate financial institutions. Weekly, the Lottery office performs analysis on data collected from the field terminals and provides the analysis to the chain headquarters of stores that sell lottery tickets in Montana.

- The Department initiated a pilot project to investigate the conversion of many of their Informix databases to Oracle databases. This pilot project included seven of the forty Professional and Occupational Licensing Board's databases. The conceptual phase has been completed and they have moved into the programming phase. The remaining 33 Professional and Occupational Licensing Boards will have the Informix databases rewritten as Oracle databases during the 2000-2001 biennium.

FUTURE DIRECTIONS

- The Department will improve the POL web site by creating a system for the electronic entry of licensing information on the Internet. Currently the licensing forms are available for download, but with the new system, applicants will be able to fill out and submit the forms online. This will streamline the application process by minimizing the possibility of data entry mistakes and limiting the amount of individuals who handle the licensing information.

- Approximately 80 PCs will have their BIOS upgraded before the year 2000.

- The Building Codes Division's PCs will be replaced and many of the replaced computers will be moved into the field for use by inspectors. Also, in relation to these PCs, the Department will create a system allowing field inspectors to update their inspection information and send reports back to the Helena office online. These projects will increase the efficiency of the field inspectors and allow them to be more responsive to public needs.

- As time and funds permit, Commerce will research imaging and document management systems in relation to streamlining information filing, retention, and access times.
- Assist their lottery system vendor with information technology issues.
- Move a portion of the office data processing staff to information systems data support staff and train them on how to run ad hoc queries on the office's lottery database.
- Remove systems from the Lottery's mainframe and rewrite those systems on the office's client/server platform.
- Perform research and analysis to determine the feasibility of providing field agents with remote access to the Helena office information systems.

http://travel.state.mt.us
The Travel Montana web site uses information technology to provide recreational information to the nation.

Office of the Commissioner of Higher Education – The Montana University System

http://www.montana.edu/wwwoche

1998-1999 BIENNIUM PROJECTS

- The University System used non-traditional means, including the Internet and video teleconferencing, to provide distributed learning and faculty development opportunities to the community. The University System has continued to be the major client for video classroom services within the State in support of its distributed learning programs. The widespread use of Internet web services offers another format for distributed learning – one that is highly interactive and engaging. To promote the development of new courses and curricula in this medium, the Office of the Commissioner of Higher Education implemented a competitive grant program.

http://www.montana.edu/wwwoche
Higher Education's web site.

This program funded the development of seven projects in which courses were developed collaboratively among faculty on different University System campuses and are delivered using primarily Internet web tools. Over 1200 students will have taken advantage of new courses created by this program within the first year of their availability. A substantial portion of a Master's Degree in Education can now be taken by teachers at home, enabling advanced education and professional development without disrupting work or family obligations.

Some of the additional outcomes of this program were:

- Teaching and Learning Technology Symposium involving 100 participants from the Montana University System, community colleges, tribal colleges, and the Office of Public Instruction.
- Faculty Training was provided through each University's instructional telecommunications facilities in the form of workshops, tutorials and collaborative instruction.
- Increased Collaboration among Faculty and higher-education institutions across Montana resulted from the cooperative development of new distance-learning courses.

- The University system extended the ability of students to make payments electronically. Electronic payment was facilitated by smart cards for commercial transactions on campus, the Interactive Voice Response (IVR) system and by web-based registration systems for tuition and fee payments. Access to buildings and information in some locations was also made easier and more secure by the use of smart card technology.
- The senior campuses of the two universities continued major campus network infrastructure development. Campus backbones were completed and campus residence halls were cabled for Internet access from students' rooms. In support of advanced research on their campuses, both senior universities have begun to explore the capabilities of the Next Generation Internet (Internet 2) high-performance networks with major grants from the NSF and NASA to implement connections.

ONGOING PROJECTS

- By the end of the 1998-1999 biennium, the University System will have implemented SCT's Banner Higher-Education Administrative Information System statewide for student records, human resource, and finance systems. The system is built around an Oracle relational database management system with information stored in tables and retrieved through Banner in a variety of forms. The Banner System provides an integrated planning and management database for review of campus performance and management of the University System.

  The Banner System also aids the University System by streamlining the reporting process for administrative management and by providing direct, online access to information by students, faculty, and staff. The Banner Student System offers an important set of new capabilities for students of the University System. For example, Banner's web service makes it possible for students to independently access information related to their education without the need to rely upon clerical staff – an increasingly important capability as student use of the web becomes almost universal. Banner Student is an online software package that supports traditional student services from recruiting through graduation. The Banner System can be accessed through the Internet and includes modules specially designed to provide access using web browsers.

  Some of the major features of the Banner Student Record System are:

  - Menu and Online Help forms provided to assist users.
  - Validation forms maintained online. These forms are user tables designed to standardize the content of data fields, control data input and allow flexibility for users while creating data and maintaining data element definitions.
  - Catalog/Schedule used to create class schedules, rosters and room assignments.

banner record system

http://www.umt.edu/cis/manuals/banner/banner.htm

- Recruiting/Admissions provides initial entry of prospective, transfer, graduate and general students.
- Registration places students in classes and computes corresponding tuition and fees.
- Student Billing creates accounts receivable for tuition, fees, and fines.
- Academic History maintains course grades, GPA, transfer information and academic history.

The Banner System is the first statewide information technology system that the University System has implemented. The University System standardized many of the field values and processes among the campuses so that Banner can provide executive information that reflects consistent information about an individual campus, a university, or the entire system.

The University System implemented the Banner System rather than PeopleSoft, the State's system being implemented in MT PRRIME, because it better fit the University's needs and was substantially less expensive over the anticipated lifetime. The Banner implementation includes the development of interfaces to the State's PeopleSoft System for consolidated reporting of University System financial and human-resource information with other state agencies.

The Banner System will continue to be maintained and enhanced. Web interfaces for student information and for faculty advising will be refined and expanded. Executive decision systems, likely supported by a single data warehouse system, will be implemented in support of the Commission.

FUTURE DIRECTIONS

- Distributed learning will become an increasingly important service provided by the Montana University System. The universities will implement broad programs to support extension of current traditional courses to use web technologies for delivery. Use of communications and information technologies will encourage and support collaboration among faculty, development of common core curricula, and delivery of substantial parts of those curricula to remote parts of the State.
- The University System will continue to enhance its Internet technologies and to improve both the depth of interactive learning opportunities and information services available to Montana students.

Commissioner of Political Practices

http://www.state.mt.us/cpp

1998-1999 BIENNIUM PROJECTS

- Provided access to the Internet for all five workstations in the office.
- Installed Microsoft Office.
- Worked with a contracted programmer to make modifications to the new internal reporting system. This system allows entry of periodic campaign finance reports into a database system and provides compilations of reports for the entire election cycle which results in quicker response to public requests.
- The Commissioner will replace the file server during this biennium because of the requirements of MT PRRIME.

FUTURE DIRECTIONS

- The Commissioner is interested in pursuing imaging technology and will be investigating its feasibility in the future. The Commissioner disseminates large amounts of information on reports of candidates and political committees to the citizens of Montana and provides this information to people throughout the United States who request information about campaign financing in Montana.

  By using a centralized Internet imaging source the Commissioner will be able to reach more individuals at a reduced cost. A centralized storage location would assist the Commissioner because the office does not have the hardware at this time that is required to satisfactorily store all of the current and historic documents.
- The Commissioner will continue to investigate the creation of an online electronic filing and reporting system. This would allow candidates to enter required information online and would enable the Commissioner to disseminate this information to the public quickly and in a more efficient manner. Online submission also decreases the chance of data input errors. Individuals in remote locations as well as those outside the State of Montana will be able to access campaign finance information more readily through the envisioned system.
- The Commissioner intends to continue to build other aspects of the web site and to provide more information online.
- In the next biennium, the Commissioner will have to replace two PCs because of the hardware requirements of MT PRRIME.

Consumer Counsel

URL unavailable at time of print.

1998-1999 BIENNIUM PROJECTS

- Completed scheduled upgrades of the PCs and file server.

ONGOING PROJECTS

- Before the end of the 1998-1999 biennium, the Counsel plans to create an Internet web site to provide a description of what the Counsel does and news concerning utility industry restructuring topics. The web site will assist consumers by offering perspective about consumer choice issues and by giving examples of criteria consumers might use in choosing various rate plans and services from providers of telecommunications, gas and electric utility services.

FUTURE DIRECTIONS

- The Counsel hopes to establish continuity with storing electronic data received in regulatory matters and be in a position to integrate with the Public Service Commission's goal to receive electronic filings from all parties involved in their dockets. The goal is to use technology in a way that will best serve the needs of the citizens of Montana.

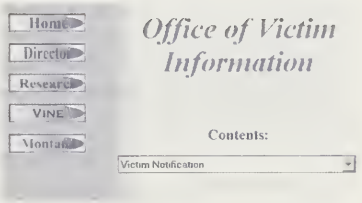
Department of Corrections

http://www.state.mt.us/cor

1998-1999 BIENNIUM PROJECTS

- The Department purchased VINE (Victim Identification and Notification Everyday), a system to help victims of crime track the location of offenders. Prisoner movement information is downloaded from ACIS twice daily and then uploaded to a central VINE system in Kentucky. This system tracks the movement of an inmate such as a change in prison location, when an inmate dies, when an inmate is released, as well as many other types of movements. Victims are able to register anonymously by phone for free.

  When a change in status of a tracked inmate occurs, the registered victim is notified by phone of the movement. The system's purpose is to help victims feel safer in their communities by knowing exactly where a particular inmate is at any one time.



http://www.state.mt.us/cor/vine.htm
VINE web site.

  The system tracks offenders from the State Prison in Deer Lodge, the Montana Women's Prison, the Treasure State Boot Camp in Deer Lodge, the regional prisons and the private out-of-state prisons contracting with the Department of Corrections.

  VINE became available August 1997. By November 1997, there were 87 people in 13 area codes registered to receive notification and the system received 832 calls. By July 1998, there were 263 people registered and the system received 1,242 calls that month. Through the implementation, Montana joins only three other states (at the time of publishing) in offering felony victims of their states an anonymous and statewide victim notification service like VINE. For more information see **http://www.state.mt.us/cor/vine.htm.**

- The Department's file servers were upgraded and the network operating system software was converted to NetWare 4.1.
- The campus-wide network at the State Prison in Deer Lodge was completed. An ethernet network was installed to provide more administrator control and to reduce the cost of the network. Access to the AS/400 system from within this network was also increased to provide for better communication and use of information among Department personnel.
- A campus-wide network was installed at the Pine Hills Youth Correctional Facility.
- All Probation and Parole staff were given online access to obtain information more quickly. This increased access enhanced service quality and public safety by providing up-to-the-minute information about individuals on probation or parole.

- An interface to the Department of Justice's Criminal History Records System was created, and this interface increases the sharing of information among state agency offices throughout the State.

ONGOING PROJECTS

- During the past biennium, the Department extensively upgraded the older Adult Correctional Information System (ACIS) and the AS/400 hardware and software. The capability and capacity of the AS/400 was tripled, the processor was replaced to increase speed, image enabling software was added, and audit recommendations pertaining to security measures which required increased processor capacity were implemented.

  ACIS was never developed to be a full Management Information System (MIS). However, needs have arisen and funding was obtained to proceed with the modification and upgrade of this aging system to make it a robust MIS. Because of the additional needs, the Department is making modifications to ACIS that include the addition of several new ACIS modules and the hardware upgrades needed to add the increased functionality and workload.

- LiveScan Fingerprinting Analysis System is a joint venture between the Department of Corrections, the Department of Justice and local law enforcement agencies. It is a good example of two state agencies working together and coordinating with federal and county governments to put a common law enforcement computer system into operation at both the state and local level.

  The system is being placed in nine different locations throughout the State including the men's, women's, and regional prisons. Identical equipment will also go to Flathead, Gallatin, Lewis and Clark, and Yellowstone Counties. The system will link with the Criminal History Records System at the Department of Justice, the FBI, and the Western Information Network (seven western states coordinating their fingerprint systems to better share information in the interest of public safety).

LiveScan will reduce the amount of time and work involved in fingerprinting and tracking of individuals.

Estimates show that, when fully operational, LiveScan will reduce the statewide fingerprint paper card volume by 70%. This shows the efficiency that the system will bring to many locations throughout the State. The system will also have a "Quick ID" feature that will allow the sending agency to determine if the individual held is a wanted fugitive before the fingerprint process is finished. This should greatly reduce the accidental or premature release of wanted persons before a proper criminal history and current court status check can be completed. It will enable law enforcement officers to perform the check on a multi-state and federal

basis more quickly than the current Montana-only check can be performed. The Quick ID equipment for the Department of Justice is expected to be available for delivery in May, 1999. For more information, see the Department of Justice on page 64.

- The Department is also installing a Digital Mugshot and Employee Badge System (includes bar code technology) at the men's prison and the regional prisons. This technology will assist correctional facility staff to identify and verify prisoners within facilities as well as while the inmates are in transit. In the event of an escape, this technology will enable the correctional and justice systems to disseminate the inmate's photograph quicker and will allow for a higher quality picture of the individual. The public's safety will be increased with this system by improving the tools that public officers have at their disposal to identify and apprehend inmates.

FUTURE DIRECTIONS

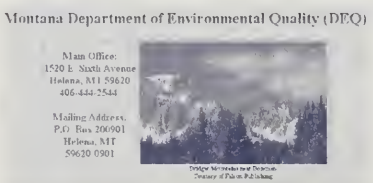
- Because of the volume of large projects initiated and completed during the 1998-1999 biennium, the Department envisions much of the information technology staff's time in the upcoming biennium will focus on:
  - Continuing to improve data quality on the new systems.
  - "Fine tuning" and installing enhancements to the new systems.
  - Keeping the Digital Mugshot and LiveScan Fingerprinting Analysis System current with Federal regulations. The volume of traffic that will be generated accents the need for increased bandwidth over all SummitNet connections involved.
- Research the feasibility of using video conferencing to increase communications between the State's numerous prisons and to reduce the amount of travel required of department personnel.
- The goal of the Department is to continue to implement and use technology to create a single criminal justice system to best protect Montana's citizens.

Department of Environmental Quality

http://www.deq.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The Department studied internal information technology resources and investigated:
  - Cost/benefit uses of staff resources
  - Staff optimization methods
  - Centralized information technology staff versus decentralized staff
  - Long term strategies
- The Department created a remote office in Kalispell. This was the second remote office the Department created (the first was in Billings) and between the two offices the number of remote dial in users was reduced by 60%. Because of the requirements of the Department's new centralized database application and the myriad of other new statewide applications requiring more network bandwidth, T-1 lines were installed in each of these remote offices. The larger capacity lines are aiding the Department in their efforts to distribute components of the Department's centralized Oracle database.
- The Department converted SBAS and PPP interface systems for contracts and accounts receivables to MT PRRIME PeopleSoft interfaces. Another issue the Department investigated was that MT PRRIME did not satisfy the reporting requirements the Federal EPA places on environmental quality agencies.
- Integrated documents and environmental study site images into a centralized database
- Created a planning team to develop a strategic information technology plan
- Implemented a three year inventory computer replacement policy
- Converted the network to NetWare 4.1
- Converted their DOS and Windows 3.1 workstations to Windows 95 workstations



http://www.deq.state.mt.us
The Department of Environmental Quality's web site.

- Technical staff desktop visits increased by 4 or 5 times because of the Windows 95 conversion
- Help desk calls increased by 25% because of the Windows 95 conversion
- Enhanced the remote dialup access provided to users throughout the State

ONGOING PROJECTS

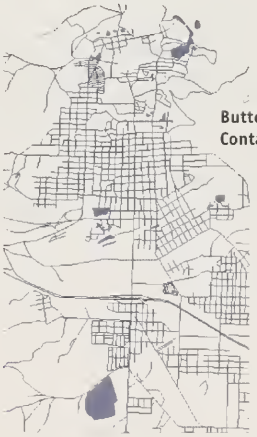
- The primary project during the 1998-1999 biennium was the centralized database project, to combine the Department's diverse database applications. The Department previously had 154 database applications written in 17 different languages. These systems did not share or link information and the maintenance on the systems placed a drain on the Department's information technology staff. Because of the large scope, this project is projected to last through three to four bienniums.

  By combining these database systems into one system, composite impacts on population, air quality, water quality, underground water flow and seepage, and other management and analytical reports can be created from the data. These capabilities will be implemented in stages as the many databases are added to the system. As the system is being created, ties and hooks to other agency's information will be added, and GIS locational indexes of information will be created through data links within the centralized database.

  The Department will create a centralized GIS office to assist the Department's agencies in seepage, air plumage, air quality, and water quality modeling. This office will also be involved in tying this information into the centralized Oracle database to create locational indexes for the different GIS models.

FUTURE DIRECTIONS

- In the coming bienniums, the Department will attempt to provide subcontractors an Internet interface to the Department's centralized Oracle database.



Butte, Montana
Contaminant Source Area

A centralized Oracle database will be used in the creation of locational indexes for information similar to this GIS map.

Department of Fish, Wildlife & Parks

http://www.fwp.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The Department's Internet web site was designed and deployed. The site won a national award within natural resource agencies, and is one of the most visited sites in Montana State Government. Recent enhancements include access to the results of special license drawings, the ability for nonresidents to download applications, posting and receipt of certain surveys, and special interest areas like "chat rooms".

http://www.fwp.state.mt.us
Fish, Wildlife & Park's web site.

- Continuing from the previous biennium, the network software was upgraded to the new levels of state standards (Novell NetWare), the desktop operating systems were upgraded to Microsoft Windows and Windows applications, and more Oracle applications were developed.
- In efforts to maintain a minimum level of technology throughout the Department's offices, desktops are in the process of being upgraded to accommodate the hardware and software requirements of MT PRRIME, Microsoft Office, Microsoft Exchange, and the Windows 95 upgrade. As these machines are upgraded, Microsoft Office is being installed on each desktop.
- Three regional "area offices" were created in Havre, Butte, and Helena. Enhanced networking in these offices uses SummitNet for access to State services and additional offerings such as the Internet.
- The Department worked with both the State Library's NRIS personnel and the Department of Administration's GIS personnel to supply and obtain GIS information for use in the Department of Fish, Wildlife & Parks mapping projects.
- The Smith River drawing process was automated using Oracle technology.
- A computer system for hunter education developed in Idaho was brought into the Department and the front-end was rewritten in Oracle for use within the State.

ONGOING PROJECTS

- Preparation, release and evaluation of a Request for Proposal (RFP) for the Automated Licensing System (ALS) involved many hours of work for internal and external teams. There were numerous meetings with the potential vendor and research into federal funding sources. This project will automate the currently manual process of issuing licenses, capturing sportsman information and collecting revenue. It might potentially expand the number of license selling agents in the state and could increase the number of locations throughout the state where individuals may purchase fishing and hunting licenses. At a minimum, it will expand the abilities of existing agents to allow issuing of any type of license at any location. Once in full production, the ALS will allow for submission of special applications from agent locations. The amount of paperwork involved should be reduced and the selling agents should be able to reduce time and effort associated with selling licenses. This project will put point-of-sale technology in all agent locations throughout the State. Online capture of data will allow for a high degree of database integrity and improve survey practices and enforcement efforts. The ALS system will also provide licenses in a faster and more cost effective manner. The manual processes involved in license purchases should be greatly reduced.

FUTURE DIRECTIONS

- Redevelop access to the Sportsman's database using the Oracle database language. This is the Department's historical database relative to hunting and fishing licenses and is primarily used for survey and enforcement work.
- Replace aged PC and mainframe programs and move older database systems to Oracle for resolution of Year 2000 problems.
- The Department hopes to have ALS in place next biennium to use electronic funds transfer (EFT) technology to transfer license fees.
- The Department may expand its use of area offices. Enhanced networking in these offices will use SummitNet for communications for State services and additional offerings, such as the Internet. In addition, within the ALS, some of the large volume-licensing agents may be wired directly into SummitNet so they will have faster transfer speeds when the ALS system goes online. Other agents would use dialup communications.

Office of the Governor

http://www.state.mt.us/governor/governor.htm

1998-1999 BIENNIUM PROJECTS

- Converted to Windows 95 to make their PCs Year 2000 compliant.
- The Office increased the amount and quality of information disseminated through the Governor's web site. Added to the web site were the Governor's main speeches, press releases, and information on boards and commissions that the Governor appoints. The boards and commissions information was a major accomplishment as the Governor appoints approximately 1200 individuals a year to positions within these boards.
- The Governor's Office of Budget and Program Planning in cooperation with the Legislative Branch continued to develop and implement the Montana Integrated Budget System (MIBS). MIBS allowed agency, Budget Office and Legislative Branch staff to develop the budget for the 1998-1999 biennium from a shared Oracle database. This development project was initiated in the previous biennium.

Governor Racicot

ONGOING PROJECTS

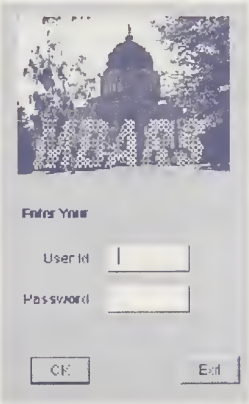
- The Budget Office implemented a new budget system called the Montana Budget Analysis and Reporting System (MBARS) to replace MIBS. MBARS is part of MT PRRIME. This system includes budget analysis and maintenance capabilities.

  The first phase of MBARS was implemented in time to develop the executive budget for the 2000-2001 biennium and to complete the budget process during the 1999 Legislative Session. MBARS was the first module implemented as a part of MT PRRIME.

  Budget Office staff members are heavily involved in MT PRRIME and MBARS because of their fiscal and budgetary expertise. This involvement includes the sharing of personnel with the MT PRRIME team and it will continue into the next biennium. For more information, see MT PRRIME on page 6 or **http://www.state.mt.us/doa/mt_prrime/montpri.htm**.

FUTURE DIRECTIONS

- Because of the extremely large volume of correspondence that the Governor's Office handles and the tracking of that correspondence, the Office will be investigating the feasibility of an imaging system. The Office will use this system for storage and workflow management related to the Governor's correspondence.
- The Budget Office plans to assist in the development of additional features for MT PRRIME and MBARS. Following are examples of additional enhancements or activities for MBARS that have been proposed:
  - Comprehensive fiscal status system for "in session" tracking that will monitor revenue and expenditure effects of all legislative actions and the status of each bill with fiscal impact.
  - Turn-around processing which entails detailed allocation of appropriations and FTE following legislative sessions.
  - Budget modification (B212) process that occurs during the interim between legislative sessions.
  - Supplement the reporting and analysis capabilities to monitor all appropriations, revenue estimates, FTE and related transactions.
  - Capability to perform position control functions.



http://www.state.mt.us/doa/mt_prrime/mbars
Logging onto MBARS

Historical Society

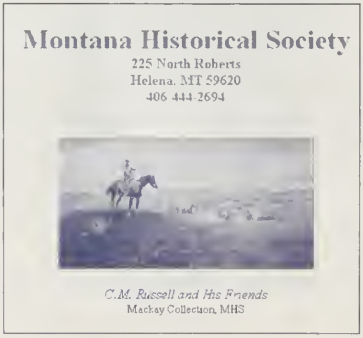
http://www.his.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The Society microfilmed materials for archival purposes. Because this technology was somewhat aged, the Society researched the capability of using imaging technology for the storage of documents.
- The Society continues to receive federal funds through electronic funds transfer (EFT) for a myriad of projects at the Museum in Helena. Another aspect of electronic commerce the Society undertook was to allow online ordering and payment for items from the Society's catalog. This was accomplished through the Society's web site and with assistance from the State Library.

ONGOING PROJECTS

- The Society is converting the Preservation Office's antiquities database to Oracle. The Society received federal funds to make this system Year 2000 compliant and to add functionality to the system. This system is to maintain a State inventory of heritage properties (historic and archaeological sites) and paleontological remains such as dinosaur fossils and to assist the Society in charging mining companies for research performed on the mining company's behalf. This information is set up to operate between the State Historic Preservation Office, the paleontological section of the Museum of the Rockies, and the Anthropology Department of the University of Montana.
- The Society created a web site. At this site, visitors can view and order items from the Society's catalog, view information about the Society's programs, and view contact information for Society staff.



http://www.his.state.mt.us
Historical Society's web site.

FUTURE DIRECTIONS

- Connecting museums throughout the State to the Historical Society office in Helena to share information about loans, museum items, collections, and exhibits.
- Providing information on collections on the Society web site and allow visitors to query the information.
- Creating a system to coordinate the tour schedules between the Society, the Capitol Building, and the Old Governor's mansion.
- Creating a retailer system that would interface with PeopleSoft to perform asset management functions not available in the PeopleSoft Asset Management module.
- Automating the Society's timecard system.
- Research connecting the State's historical properties such as Virginia and Nevada City to the State network.

Judicial Branch

http://161.7.121.6 (State Law Library)

1998-1999 BIENNIUM PROJECTS

- With the connection of the 56 District Courts to SummitNet, the District Courts are becoming information providers through a statewide central repository of court information. This central repository will provide needed information to other departments including the Departments of Justice and Corrections. Information about child support orders to the Department of Public Health and Human Services, Child Support Enforcement Division, as required information by SB 374 is also supplied.
- Implemented an electronic card catalog system in the State Law Library.
- Converted the network operating system at the State Law Library from OS/2 to Windows NT.

http://161.7.121.6
State Law Library web site.

- Implemented a database pilot project in Great Falls for all District Court actions, judgements, and opinions.
- The Montana Judicial Branch is one of only five states having the same hardware and software platforms in all District Courts (for good communication among them.) However, Montana is near the bottom of the list in the amount of expenditures for information technology.

ONGOING PROJECTS

- The Judicial Branch implemented several automation projects during the biennium including the automation of each of the 56 District Courts and 90 of the 150 Limited Jurisdiction Courts. Computer systems were installed in the 56 District Courts and each court was provided a single connection to SummitNet. In these courts, DOS based machines with word processing software were installed, and the Montana Judicial Case Management System (District Court) and the Montana Limited Judicial Case Management System (Limited Court) were installed. These offices include approximately 700 users.

FUTURE DIRECTIONS

- The continued support and growth of information technology by the Judicial Branch for the outlying District Courts will be contingent on the continuance of the $5 surcharge applied to court case filings. The surcharge was enacted by the 1995 Legislature through HB 176 and will sunset in July 1999. If this surcharge is not continued, all information technology support to the District Courts will need to come from the General Fund. The Judiciary needs to continue to move the courts toward new technologies that include the following:

- Electronic filing/submission of documents that will allow easier access for individuals to use their court system.
- Imaging technology will aid in the retention of court records and the reduction of paperwork flowing through the court system.
- Electronic courtroom that uses the "DOARS" system. This entails using electronic means in evidence presentation. This system significantly decreases the amount of time needed to try a case.
- Electronic legal research can aid in every aspect of a court system, and would especially aid judges in the making of court decisions.
- Public access to information and the opinions of the courts could be increased through electronic methods such as the Internet or a central database of court information that is publicly accessible.
- Video arraignment and electronic conferencing are technologies that could be used in Montana court systems to handle remote situations.
- Court access to other District Court actions and judgements could be increased by the implementation of a central database repository into which every District Court would submit information. This repository would readily provide statewide information on district courts and limited court cases. This information is not currently available to the courts.

- Other topics the Judicial Branch will research are: a statewide calendar system to provide judges with information on District Court schedules, a statewide restitution system to provide courts information on individuals and restitution that is already being levied against the individuals, and a system to assist in the sharing of jury pools between local, district, and federal courts in the State.

Department of Justice

http://www.doj.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The Montana Criminal Justice Information Services Project (MCJISP), through various electronic systems, the Department provides law enforcement and related agencies with a wide range of criminal history information. The Department receives background information on a person's criminal history from local agencies, including local law enforcement and the courts. The Department then maintains the information and provides it, upon request, to those qualified under the law to receive it.

  The project is working in partnership with local criminal justice agencies, as well as other State and federal agencies to:

  - Evaluate the needs of local and state agencies that use criminal history records and other criminal justice information systems.
  - Explore the best methods for collecting, storing and disseminating this information through an integrated approach.

A Lewis & Clark County dispatcher using the Criminal Justice Information Network.

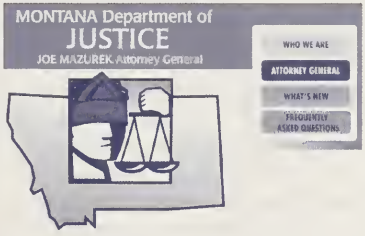
  - Develop cost effective and workable responses to meet the needs of the people who use criminal justice information and to meet the guidelines set in State and federal law.

  The MCJISP will enhance the sharing of data from separate computerized systems to provide high quality criminal history data and related information to law enforcement agencies, the courts, the Department of Corrections, and other users throughout the State. Coordinating and linking these systems will provide faster access to complete information on the criminal history records of those people who commit crimes in Montana. For more information see **http://www.doj.state.mt.us/csp/mcjis.htm**.

- The Mobile Data Terminal Pilot Project consists of a three-car, prototype, mobile data network to deliver selected Criminal Justice Information Network (CJIN) information to law enforcement vehicles. This pilot assisted the Department's Mobile Data Oversight Committee to produce the technical and operational specifications required for mobile access to CJIN. The mobile network will consist of the mobile computer and enabling software, the hardware and software necessary for the transmission and receipt of data over the Highway Patrol's existing RF (radio

frequency) network, and the interfacing hardware and software between the mobile base station(s) and CJIN. The technical and operational specifications developed will have a significant impact on the Department's ability to deliver CJIN information to law enforcement vehicles.

- Due to various laws passed during the 1997 Legislative Session, many changes were made to the Motor Vehicle Division's Title and Registration System. Principle among these was Senate Bill 57 that changed the way vehicles are valued. Substantial effort by various divisions within the Department as well as assistance from the County Motor Vehicle offices was necessary to redesign the processes in the existing Title and Registration System to tax as well as value vehicles, using the same (mainframe) technology, in order to comply with SB 57. For more information see **http://www.doj.state.mt.us/mvd/index.htm.**
- Purchased a software package named CODIS for the State Crime Lab. This forensic science package, DNA Analysis System, assists the crime lab in the analysis of DNA evidence.
- Consolidated four division field offices in Billings into one field office location. This was a major accomplishment as duplicate efforts between the divisions were eliminated and the offices were made more efficient and cost effective. The Department replaced or upgraded 250 PCs in the county treasurer's offices throughout the State. Many of these offices were connected to SummitNet at the same time.
- Converted to CICS 4.1, CTRL-M (job scheduler) and other mainframe system changes.
- Created a Department web site hosted by the State Library to disseminate office information to the public.
- Assisted the Attorney General's office to switch their resource utilization to Internet law resources.



http://www.doj.state.mt.us
Department of Justice's web site.

ONGOING PROJECTS

- The Laboratory Information Management System (LIMS) is a system that will be used by law enforcement and prosecution agencies. This system assists laboratory staff in performing case management, tracking evidence, logging the usage of evidence, and summarizing evidence information. The system will also provide justice personnel with statistical information on the types of requests the laboratories receive.
- The FBI has been working on the National Crime Information Center (NCIC) 2000. This is a comprehensive improvement program for many of the criminal justice information systems to which Montana's CJIN System has connections. Many of the improvements in the CJIN message switch, the downsizing of the Armory computer and other improvements to the Criminal History Records System are interrelated to the NCIC 2000 Project. The "initial operating capacity" for NCIC 2000 is currently scheduled to occur during the second quarter of fiscal year 2000. For more information see **http://www.fbi.gov/2000/2kv1n1.htm.**
- The LiveScan Fingerprinting Analysis System was coordinated with the Department of Corrections. This is a cooperative project between the two Departments to use the Automated Fingerprint Identification System (AFIS) software from the Western Information Network group. The information from this system will be used in several systems including the State Criminal History Repository that the Department of Justice has in place. Devices were placed in the field to prepare for the implementation of the system during the 2000-2001 biennium. For more information see the Department of Corrections on page 51.
- The Automated Lien Filing pilot was another result of the 1997 Legislative Session. The pilot was created to connect financial institutions to the Title & Registration (T&R) System within the Department to provide the capability of electronically filing liens on vehicles more efficiently than the current primarily manual process. The pilot allows authorized banking and dealership partners to query information in the T&R System and file liens on new vehicles. In the 2000-2001 biennium, an evaluation of the system will take place and depending upon the evaluation, increased functionality may be added to the process.
- The Criminal History Improvement Project replaced the mainframe system with a new client-server based system. Federal funds were received to make the criminal history information more readily available and sharable; thus, the conversion from mainframe to mid-tier environment. In addition to the conversion of the system, the Department added Sexual and Violent Offender Resource (SVOR) functionality. The criminal records in this system are utilized by the criminal justice community in a number of critical areas: issuing weapons permits; determining criminal sentences; making background checks for public employment; making recommendations for parole and probation; and assisting prosecutors in criminal cases.

FUTURE DIRECTIONS

- The Department will be consolidating five division offices in Missoula into a single location to use shared resources.
- Driver's license photos will be shared with other law enforcement divisions within the Departments of Revenue, Corrections, and Public Health and Human Services in the near future. This sharing of identification material will assist agencies in properly identifying customers and offenders and will reduce the cost of certain business functions performed by these Departments.
- A dialup Automated Accounting and Reporting Project (AARP) for gaming machines throughout the State will be proposed in the 2000-2001 biennium. The Department will seek a computerized accounting and reporting system to obtain play and revenue statistics from more than 18,500 licensed video gambling machines in Montana. The system will have a central computer to communicate, through a modem, to each licensed video gambling machine every 24 hours to retrieve statistics and to check the integrity of the gambling device. An automated accounting and reporting system will improve the regulation, inspection, and tax reporting requirements of video gambling machines.
- As a follow up to the LiveScan Fingerprinting Analysis System, the Department will link fingerprint information to additional state agency systems and federal government agency systems in an attempt to communicate information freely among law enforcement agencies across the country. This will further the Department's goal to work cooperatively with other criminal justice agencies to integrate systems and share information.

Department of Labor and Industry

http://jsd.dli.state.mt.us/dli_home/dli.htm

1998-1999 BIENNIUM PROJECTS

- The Department encouraged insurers to transfer information to the Department through electronic data interchange (EDI) technology. This information was automatically stored in the Worker's Compensation Automation Project (WCAP) that tracks the history of worker's compensation within the State. Many insurers took advantage of this technology. This EDI system reduced staff time for entry of information, and provided more accurate and timely information to WCAP.
- The Montana Job Source web site accepts resumes of job seekers and job postings from private businesses, state and education employers. It allows both employers and job seekers to conduct online searches for potential job candidates or job openings. The Montana Job Source replaces three computer job search systems. It enables individuals to search for job openings that fit their needs, enables employers to search for applicants with the skills they need, and allows individuals to apply for jobs online. Job Service is also able to enter job openings online and transfer them to America's Job Bank for listing nationally. This was a joint effort of the Job Service Division and the Department of Public Health and Human Services. The Department of Public Health and Human Services provided the funding. For more information see **http://doaisd503.state.mt.us/mjs/owa/mjs0010w$.startup.**

http://jsd.dli.state.mt.us
The Job Service web site.

- The system that stores job bank information for the State of Montana resides on an Oracle server. Job orders and announcements are transferred to the national America's Job Bank system in nightly batch processes.
- The Electronic Prior Claims System allows for electronic inquiry by providers (carriers) and others into prior claims data through a secured Internet based Oracle solution. This system aids insurers in obtaining more information on past claims to better assist the claimants on current claims. This project was requested and funded by the insurers.
- The Case Tracking System (CAT) assists the Department in following cases throughout divisions and systems. There are multiple systems throughout the Department for different functions, there existed a need for a management system to connect these systems and reconcile record information. Time will be saved and hearings expedited because of the coordination of these systems.
- Limited MT PRRIME interface work was completed.

- The Unemployment Insurance claims intake process was incorporated into two telephone centers which allow claimants to file their claims by telephone rather than by driving to a local office. This process change included the development of an electronic document system.
- The Department used federal workforce development grants to set up development centers throughout the State. These centers were provided with joint case management systems to warehouse information from vocational rehabilitation, welfare, unemployment insurance, and union centers.

ONGOING PROJECTS

- The Department of Revenue through POINTS absorbed the responsibility for employee benefits system contributions. The wage and charging processes of employee benefits were retained and incorporated into the new Montana Integrated System To Improve Customer Service (MISTICS) System that is able to share data with Revenue's POINTS. Development of MISTICS began during the 1998-1999 biennium and will be finished next biennium.

  This Oracle database system is a rewrite of the Unemployment Insurance Benefits System. It will aid the Department staff in every aspect of unemployment filing from claim input to producing benefit checks for the unemployed. The information produced in this system will then be electronically transferred to Job Service's systems.

FUTURE DIRECTIONS

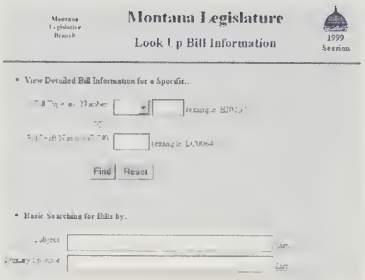
- The Department is very involved in the proposal to create a centralized imaging service with the Department of Administration and play an active role in the ITMC Imaging Subcommittee. For more information, see Imaging on page 25.
- In the upcoming biennium, the Department will perform numerous maintenance tasks on systems and will research adding the ability to access the MISTICS system from the Internet and to provide information to it through electronic means (EDI). The Department will be looking into adding an interface to the Montana Job Source System that would allow the electronic transfer of job applications to America's Job Bank. The Department will be making additions to several systems to provide them with an Internet interface.

Legislative Branch

http://www.state.mt.us/leg/branch/branch.htm

1998-1999 BIENNIUM PROJECTS

- Converted from Windows 3.11 to Windows 95
- Worked in conjunction with the Office of Budget and Program Planning (OBPP) to implement a new budget development system, Montana Budgeting and Reporting System (MBARS). MBARS allows agencies to input their budgets into the system and allow both the OBPP and the Legislative Fiscal Division better and more timely access to the data to perform an effective analysis of the data.
- Increased the amount of data available to the public via the Internet. The current text of bills and journals are now online, as well as the text of the Montana Code Annotated (MCA). The Legislative Audit Division (LAD) now has Audit Reports available and the Legislative Fiscal Division has put the Budget Book on the Internet. For more information, see the Legislative Automated Workflow System (LAWS) at **http://laws.leg.state.mt.us/law/plsql/LAW0200w$.startup.**



http://laws.leg.state.mt.us/law/plsql/LAW0200w$.startup. The LAWS web site.

The computer systems were rewritten using the latest computer technology. These systems were on 10 or more year old technology and included approximately 70% of the total amount of programs that the Legislative Branch maintained. This project is called the Legislative Automated Workflow System (LAWS). The new system has an Internet interface to Bill Status Information. Bill Drafting, Engrossing, Enrolling, Journal, Committee Minutes, and Amendments processes were moved to a Windows interface from the old DOS interface. This system will provide more readily available access to session data.

- The Legislative Audit Division SBAS system was significantly enhanced. Auditors now can get a complete financial schedule for an agency by just entering the agency number and the year the information is needed for. The capability was also added to drill down to the transaction level when a question arises about an expenditure. This system has significantly increased the efficiency of conducting an agency audit. For more information **http://www.state.mt.us/leg/audit/index.htm.**
- The Branch implemented the Information Request System to track requests from the public and from Legislators for information which the Legislative Branch provides. This system will help managers in the Legislative Branch better manage this workload and prevent staff from working on duplicate requests.

ONGOING PROJECTS

- The Branch will continue to upgrade software packages to keep current on supported releases, will continue to fix and maintain PCs, servers, and printers, and will continue to attach Branch PCs, servers, and printers to the State network.
- The Branch has established a 4-year life span for PCs in their offices and will replace PCs and PC peripheral equipment after 4 years of use. The Branch has also established a replacement cycle of 4 years for network file servers and printers.
- The Branch will maintain current application systems such as the Information Request System, the Audit Billing System, the LAWS and the LAD SBAS System. Full-time staff or contracted services, or both, will be used to maintain the operational status of the Legislative Branch application systems. Additionally, the Legislative Branch will maintain its leased Oracle server services from the Information Services Division for several of the Legislative Branch Oracle systems.
- The Branch will continue to support the centralization of IT staff and ensure the development of staff capabilities to effectively use the ever-changing technology and to understand and provide IT solutions to meet the needs of the Branch.

FUTURE DIRECTIONS

- The Branch anticipates some lost productivity during the move out of the Capitol Building to accommodate Capitol Renovation. All of the Branch personal computers and file servers will need to be moved. Branch IT personnel may have to support staff in two locations (Capitol Building and the remote site) instead of one location as before. If this scenario comes about, IT support costs will increase. The Branch continues to work with the Department of Administration on the move issues. The Branch hopes to have all of the issues and costs associated with the move identified and budgeted for in the Capitol Renovation Budget. Because of the Capitol Renovation Project (and the subsequent relocation of Branch staff), there is a large amount of uncertainty surrounding IT initiatives that could be accomplished during the next biennium.

Capitol Renovation underway.

- The Branch will be gearing up for the districting and apportionment study that must be performed every 10 years. This effort will entail a coordination of services between the Legislative Branch, the State Library GIS staff, and the ISD GIS Services and Coordination Section.

- The Branch will convert to the State standard desktop operating system.
- The Branch will prepare a disaster recovery plan for the Legislative Branch network and application systems to minimize risks in a cost effective way.
- The Branch will perform an audit of IT systems within the Legislative Branch to ensure that they are complying with proper IT development and operational standards.

Department of Livestock

URL unavailable at time of print.

1998-1999 BIENNIUM PROJECTS

- The Department performed a large amount of internal system maintenance. This maintenance included an emphasis on Year 2000 compliance work and work on One-Stop Business Licensing, the Microsoft Office desktop conversion, the Microsoft Exchange rollout, and a department-wide desktop operating system conversion.
- A new Information Systems Technician position was created. The position will provide microcomputer support and Internet web services development and maintenance for the entire department. This position will resolve microcomputer, mainframe, and network problems for local and remote users; administer software and hardware installations and upgrades; will be involved in the design, development and maintenance of Internet web services; and will provide I/O control for department mainframe applications.

ONGOING PROJECTS

- The Department began the initial testing and development phase for the migration of in-house database systems to Oracle. Some of the systems may be developed as Oracle web applications that would then be available to the livestock industry and the public on the Internet to better serve the Department's customers' needs. Web application possibilities could include the Brand Recording requests, Animal Health regulations, and more. This application migration process will continue over the next few years.

FUTURE DIRECTIONS

- The Department will connect the 15 remote Brand Offices to SummitNet. This will allow them access to many applications and in-house databases that will provide more efficient means to disseminate information to the livestock industry and the public. The Brand Offices will also be able to update information online and transfer data electronically, eliminating duplication of information. Currently, these remote offices have connections to the mainframe to access the Montana Livestock Brands System. Access to SummitNet will decrease telephone calls, mail, and provide a faster turnaround for inquiries.
- The Department will continue to connect field personnel to SummitNet. These individuals, Livestock Inspectors, Meat Inspectors and Milk Inspectors, do not currently have access to SummitNet. The Department will deploy portable computers, or desktop computers in home offices, and allow field personnel access to appropriate applications and in-house databases. This will allow them to update information online or transfer data electronically, eliminating duplication of information between the field and the Helena office. This will allow the Department to satisfy the inspection needs of the livestock industry in a more efficient manner.

Department of Military Affairs

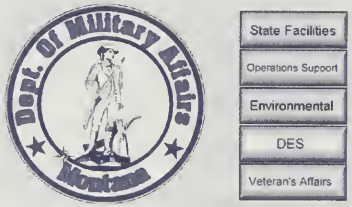
http://www.state.mt.us/dma

1998-1999 BIENNIUM PROJECTS

- The Department upgraded most of their computer related hardware in order to keep pace with information technology and to make the office capable of handling the new, demanding computer systems the State is implementing.

ONGOING PROJECTS

- The Department initiated discussions between the State and the Guard Bureau on a cooperative distance learning project. The federal government has committed funds for a pilot distance learning project through the Montana Army National Guard. The intent is that by sharing the system between the Guard, the State, and local governments and the citizens of Montana, a quality product can be provided with the costs shared through a usage fee. Distance learning presents numerous opportunities for rural Montana citizens to take advantage of courses that would not be easily accessible to them otherwise. Once the planning is complete and the funding secured, a six month implementation phase is contemplated.



http://www.state.mt.us/dma
Department of Military Affair's web site.

- The Department initiated research concerning tying the State data network into the federal data network at Fort Harrison. This connection between the two networks would assist Department personnel located at the Fort in accessing State resources and sharing information.

FUTURE DIRECTIONS

- In the future, the Department will be working on connecting remote personnel to SummitNet. Currently, the Department has several field representatives who do not have access to State information technology resources. By connecting these personnel to the network, efficiency would be increased within the Department and emergency services could be disseminated in a more timely and effective manner.

Montana Arts Council

http://www.state.mt.us/art

1998-1999 BIENNIUM PROJECTS

- The Montana Arts Council rewrote their main database containing grant information. This database helps the Council manage their multiple grants program, manage their mailing lists, and maintain a history of grant accounts. Because of this rewrite, the Council was able to provide detailed reports to the public on the Internet, and was able to easily keep these reports current.
- Installed an NT network in their office
- Simplified grant applications
- Scanned parts of typed grant applications to create electronic documents

FUTURE DIRECTIONS

- The Council will continue to simplify and streamline their business processes and requirements through the next biennium. Also, they will disseminate grant applications through their web site, and will create an online artists registry that will provide information on artists who are available to perform programs in schools.

http://www.state.mt.us/art
Montana Arts Council's web site.

Department of Natural Resources and Conservation

http://www.dnrc.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The Department found many uses for Geographic Information Systems (GIS) such as: analyzing timber stands, roads, river drainages, oil and gas deposits, and agriculture and grazing leases. Data on the geography, hydrology, wildlife, land use, mineral production, land ownership, water rights, and plant life of Montana can be analyzed spatially and represented in the form of maps. For more information see **http://nris.state.mt.us/gis/gis.html.**

  The first step toward creating GIS applications to utilize Department data was to redesign the current mainframe databases. This project utilized database software to manage the combination of numerous database systems.

  The Trust Lands Division, Forest Management Bureau was heavily involved in GIS in the past biennium and created GIS systems with data on State forests. This data is usable by the Department field offices for timber harvest analysis, hydrology assessments, wildlife habitat identification, old growth management, stand level inventory, establishment of effective patch sizes, and for locating roads and structures.

  The Reserved Water Rights Compact Commission (RWRCC) staff maintain a graphic water rights database that uses data extracted from the water rights system on the mainframe. RWRCC began recording photo images of many of its project areas in the State and began including these photos in the Department's centralized Oracle database.

  Spatial climate data was modeled with watershed basins to determine runoff situations for designing dam spillways. Spatial data on groundwater development and its effects on wetlands and related lands are used for clarifying management decisions. Historical information was digitized from the Water Resource Survey maps produced in the 40s, 50s and 60s and used with the spatial data. These uses, along with the incorporation of aerial photographs into the spatial database during the biennium, increased and made more effective the information that helps direct planning, monitoring, and analysis of the water resources of the State.

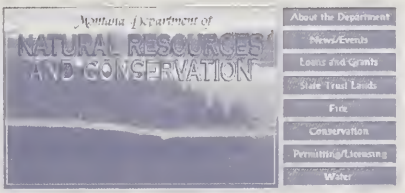
- Additional field offices were connected to SummitNet. Approximately 40% of the field offices are currently networked and the other 60% are expected to be connected during the 2000-2001 biennium. The connection of these offices to SummitNet improves communications and the flow of information between the field offices and the central Helena office.

- In 1995, the legislature combined a large part of the existing Department of Natural Resources and Conservation with a large part of the Department of State Lands (DSL). The new agency retained the name Department of Natural Resources and Conservation. At the time of reorganization, computer operations were almost exclusively on a minicomputer system. DSL's computer operations were Novell LAN/WAN based. Since the executive reorganization, the Information Technology Bureau at the reorganized Department worked to move to a single multi-user computer platform.

  In August of 1998, the prior minicomputer system was unplugged. After two years of migrating systems, users and rewriting computer systems, the Department was on a single multi-user computer system. Over the 1998-1999 biennium, nine of the 35 office locations were migrated to Novell networking software and SummitNet. These arrangements provide seamless communications and data sharing between Department users and the public. The reorganized Department is new in terms of computer operations.

- The Department provided public access to the Department's water rights database. This access is provided through kiosks in the nine water resource offices throughout the state. With this system, anyone from the public can walk into a resource office, and look up water rights information that the Department collected.

- All of the divisions have Internet web sites. The Forestry Division's web site disseminates information about program responsibility, announces upcoming events and conferences, and provides links to other web sites with programs and information of interest to employees or cooperators. The Trust Land Management Division's portion of the web site includes program information derived from annual report information. Central Services Division provides information about job openings and bid announcements. Conservation and Resource Development provides information and forms for applying for grants and information on conservation programs. The Reserved Water Rights Compact Commission provides information on water use compacts with the State's Indian tribes. Water Resources Division has information on water rights and water use permit legislation. The Oil and Gas Division provides information on current State gas and oil production.



http://www.dnrc.state.mt.us
Department of Natural Resources and Conservation web site.

ONGOING PROJECTS

- All of the Department's software systems were developed before personal computers and local area networks had the capabilities they possess today. The large systems: water rights, trust land marketing, oil and gas, and fire protection, were developed to reside on the mainframe platform which was state-of-the-art 10 to 20 years ago. The Department determined that there were many reasons to migrate their databases to a user-friendly, GIS-capable, and Internet-ready platform. Some of these reasons are reporting capability, user interface, training time and expense, GIS capability, data integration capability, and public accessibility. During the biennium, work was begun to combine the Department's databases into a centralized database system.

FUTURE DIRECTIONS

- Geographic Information Systems (GIS) information is a very efficient means to represent natural resource information. In the coming biennium, the Department will be doing a great deal of GIS work.

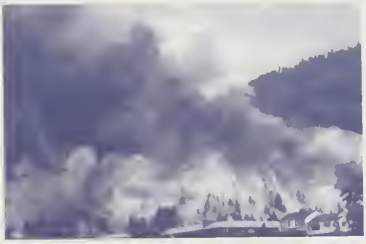
  Trust Lands Division – GIS technology for agriculture and grazing is an area that will be investigated in the future. The research will include looking into mapping of land ownership, land use, soil types, recreational access, wildlife habitat, cultural sites, commodity types, and animal types. Potential subsurface mapping and analysis of subsurface ownership, mineral reserves, oil and gas drilling locations, and geologic data may be done. The Minerals Management Bureau will research the feasibility of an oil and gas GIS application that would include standard Board of Oil and Gas well location, production, and spacing information overlaid on State Trust land mineral and surface ownership layers.

  Water Resources Division – As the Department's mainframe databases are converted and made GIS ready, water resource GIS maps will be made available to the public through the field office kiosks. With a GIS map on the computer screen, the user will be able to point at a particular diversion from a river or stream, and the water rights for that diversion would display on the screen. This will replace the process of examining paper files to look for all water rights records for the diversion in question.

  In the coming biennium, the Forestry Division will hire a contractor to locate all phone lines, power lines, septic systems, water lines, and computer cables in the Forestry Complex in Missoula. Currently, the complex's buildings and roads have been mapped and the data stored in the Forest Management Bureau's GIS. The data collected by the contractor will be added to this GIS map. This will provide the Administrative Services Section with the ability to quickly and easily produce maps showing the location of phone and utility lines for future repairs, maintenance work, and other uses.

  The Fire and Aviation Management Bureau maintains a mainframe database on fire protection assessments (FPA). This data is used to record land parcels for which the bureau provides fire protection. These tracts of land are the bureau's fire protection

boundaries. In the coming biennium, a GIS system that could graphically represent these boundaries may be created to determine responsibilities for fire suppression, determine suppression strategy, locate structures and water sources, and aid in dispatch. The GIS data would be shared with other emergency service entities and would contribute to statewide emergency service GIS applications.



The Fire and Aviation Management Bureau works with local fire crews to battle a blaze.

The Oil and Gas Conservation Division has a large mainframe database holding information on oil and natural gas drilling, production, and underground injection. The division will research creating a GIS system to display well locations for reference and analysis. With a GIS system:

- Proposed wells could be examined for compliance with requirements such as setbacks from boundaries.
- Well production data could be analyzed in three dimensions to determine formation size, geography, and volume.
- Oil field boundaries could be established and mapped, and well siting within the boundaries could be analyzed.
- Oil and gas data could be presented graphically on a web site for industry and pubic access.

- When the mainframe databases are converted to an Internet format, the Department will investigate a variety of Internet services that could be provided. The Department could make their databases Internet accessible so the public would be able to easily query the data. Potentially this database interaction could reduce phone inquiries concerning agency data. Department users at remote locations could use the Internet interface to view and report data in the same way as public users. In addition, field offices could directly input data in the Department's databases rather than sending information to Helena to be updated.

  Another Internet project that will be researched by the Fire and Aviation Management Bureau, is the use of online registration for Bureau-sponsored conferences and a File Transfer Protocol (FTP) site for uploading and downloading fire statistics and maps.

- The Department has a long range goal to have all field offices connected to SummitNet. This will give all field personnel the same access to electronic mail and all internal systems. This will greatly increase the efficiency of the field offices.

Office of Public Instruction

http://www.metnet.state.mt.us

1998-1999 BIENNIUM PROJECTS

- As a result of 100% turnover in the systems development staff over the past year, role definition analysis was conducted to improve service and to mitigate the problems of operating critical systems while suffering retention problems. For more information, see the ITMC Recruitment and Retention Subcommittee on page 140.
- Converted the network operating system from IBM LAN Server and OS/2 to NetWare 4.x and Windows NT. Also converted to Windows 95 on the desktops.
- A new training center was developed that is now used for satellite based training and conferences, VCR based training, in-house and applications developed for school district use, MT PRRIME training (for all agencies), video conferencing, and agency conference facilities. The Office remains committed to the use of technology and the need for professional development for all staff who use technology.
- As new desktop workstations are purchased for the Helena office, the replaced workstations have been provided to Montana School Districts to complete their Montana Automated Education Financial and Information Reporting System (MAEFAIRS) work. Many school districts and County Superintendents did not have the equipment necessary to perform MAEFAIRS tasks until receiving these computers.
- The Office is performing cost/benefit analysis pertaining to the moving of many systems to the Internet in an attempt to provide information to school districts and the public in a more user-friendly manner. Staff are sensitive to the fact that there is a significant portion of the population in both schools and the general public who are not connected to the Internet and continue to use equipment that is not Internet capable and use traditional dialup facilities at lower communications speeds. The Office will continue to offer access to Legislative information for the 1999 Legislative Session to non-Internet enabled users.
- The METNET Bulletin Board System (BBS), which also serves as the State BBS, was modified so that through one user interface users could access the same set of data using either a dialup client interface or an Internet browser (through an Internet connection.) The main advantage of this new system is that both interfaces use a single repository of data limiting the need to update multiple systems to ensure equitable access for all users.
- The Office's Internet and NT services personnel created search engines that search web site information and also web sites outside of the Office's site.
- One main focus that may not be readily seen in the above projects is the equity analysis that was conducted by the information technology managers during the current biennium. This entailed:

- An analysis of how to keep up with the rapid information technology changes without outdistancing their clientele.
- Facilitating local school districts in the purchasing of software through special education pricing structures.
- Constant offerings of training classes in a variety of topics for both the staff and school district staff.

http://www.metnet.state.mt.us
The Office of Public Instruction web site.

- The formation of the Office's Information Management Advisory Team to perform analysis of data collection strategies and information technology tools, and the focus of technology use in day to day operations.

ONGOING PROJECTS

- The State standard database products, Oracle and Microsoft Access, were installed. Work has begun to rewrite the existing DOS-based FoxPro systems into Microsoft Access and, if appropriate, Oracle.
- Maintenance for the MAEFAIRS FoxPro system for the creation of budget and trustees reports has been handled through a contract with KPMG - Peat Marwick. The Office is studying a possible conversion from the FoxPro system into a Microsoft Access system to conform to state standards. The MAEFAIRS system collects budget and trustees' information as well as enrollment information from Montana schools. This information is used to calculate funding for school districts and aids in the electronic transfer of payments to and from these districts.

FUTURE DIRECTIONS

- Research allowing teachers to recertify through the Internet and to electronically transfer recertification fees to the State.
- Research disseminating and collecting more information electronically using the Internet and web/BBS hybrid systems to ensure equitable access for all users.
- Research ways of providing more bandwidth to schools or seeking alternative means of providing affordable electronic access to rural schools.
- In partnership with the Northwest Educational Technology Consortium (six states in the Northwest and Northwest Regional Education Labs), the Office will investigate the feasibility of providing and integrating two way video capabilities in Montana's rural classrooms.

Department of Public Health and Human Services

http://www.dphhs.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The Health Policy and Services Division has purchased the MEDSTAT Group's Panorama View program to assist in the analysis and management of the Medicaid program. Panorama View uses detailed information gathered by the Department's Medicaid Management Information System (MMIS), to provide Medicaid managers and analysts with a broad, strategic view of the Medicaid program performance. It provides an interactive access to key performance measures needed to effectively monitor and manage the Medicaid program. Colorful screen displays, helpful navigation tools and smart interfaces let decision makers quickly and easily identify trends and potential issues. With custom tailoring available to meet specific State requirements, the program's modular design provides a standard framework for assessing program performance in areas of expenditures, eligibility, utilization, quality, and provider access and expenditures. The program features these six "topical folders", each with graphs and maps for summarizing related program dimensions. These folders contain the key strategic and tactical indicators of program performance for each topic. This program is scheduled for implementation by January 1999, and will provide managers with a ready source of information for making program decisions.
- The Vital Statistics Bureau is in the process of implementing the Automated Data Integration Operating System (ADIOS). This is an Electronic Birth Certificate (EBC) filing system, purchased from HumanSoft Corporation. It is currently installed in 11 hospitals in Montana, with five more scheduled for installation in the near future. The electronic birth certificate is entered directly at the hospital in which a child is born, then transmitted by modem to the Vital Statistics Bureau where the certificates are incorporated into the central birth record database. Once in the database, the certificate is processed to check for possible errors and to assign codes for the statistical use of State and federal agencies and researchers. The sixteen hospitals involved will provide electronic certificates on about 90% of the 11,000 average Montana births per year. Remaining hospitals and midwives will continue to submit paper certificates. This system will greatly reduce the workload of the Vital Statistics staff by reducing the number of birth certificates that they have been manually entering into the central birth record database. In addition, all birth certificates will, with the new system, be available electronically to authorized persons for certified copies.

  The EBC also provides the convenient value-added service of automatic application for social security cards for newborns. When requested by parents, birth information is transmitted directly to the Social Security Administration and the card is issued to the family.

- The Public Health Laboratory has committed funds for the purchase and installation of a new Health Laboratory Information System. The software is Costello, a product of Orchard Software Corporation, and is a full laboratory information system designed to assist the laboratory staff in providing quality results in the most efficient and rapid means possible. Costello automates tasks within the pre-entry and post analytic stages of specimen processing. It allows for order entry, relays orders to laboratory instruments, receives results from analyzers, and prints or transmits those results once approved. It will also assist with quality control administration, lab billing reports, and ad hoc reports. It operates using Windows NT, and will be networked within the laboratory and also with the Department's programs where laboratory information is used. It replaces 15 separate databases currently in use, none of which have the ability to communicate with each other. Installation and training is planned for the fourth quarter of 1998.

- The Department and its 10 Community Services Block Grant (CSBG) subgrantees, or Human Resources Development Centers (HRDCs), have worked collaboratively with BDM International (now TRW) to develop a personal computer based Oracle client tracking database as part of integrating "results oriented management and accountability" with CSBG activities in Montana. The Central Database System (CDS) contains information on individual clients, client households, and each HRDC for internal use and reporting purposes.

  To eliminate duplicate data entry and ease the burden on clients of having to prepare separate applications for each form of assistance sought, interfaces were developed between the data warehouse and external mainframe computer systems housing all of the various public assistance programs. The interfaces allow CDS operators to access client information as old as four years and update it for use in the provision and tracking of services to clients.

  The State CSBG Office and the HRDCs are able to utilize the CDS to produce surveys, select survey recipients from the data warehouse (randomly or using selection criteria), and catalog and analyze survey responses. CDS operators are also able to produce preformatted reports and utilize the Oracle 3 Discover Query Tool to conduct virtually limitless queries against single or multiple information fields in the data warehouse.

  To date the CDS has been deployed in nine of Montana's ten HRDCs with the remaining HRDC scheduled to be completed by the end of the 1998-1999 biennium.

- During the second quarter of this year, the Department implemented an automated help desk software system from Bendata Inc. called Help Desk Expert Automation Tool (HEAT). This system is a platform independent, 100% customizable system for automated call tracking, problem resolution and management, messaging, reporting and trend tracking. Utilized by the Department's technical support section, the system allows first level technicians to log incoming trouble calls regarding computer problems, track their status as work is accomplished, maintain caller history, profiles and configurations, and produce comprehensive reports for systems managers. It also creates and maintains a knowledge base of problem solutions, as

well as an inventory of all equipment in the Department. The program also allows for automatic trouble ticket generation, with assignments and alerts to second level technicians, as well as auto-escalation of priorities when deadlines for completing corrective action are approached or passed. The program has provided a systematic and efficient approach to providing the staff with computer hardware and software technical support, with considerably improved management of the effort.

- Medicaid Management Information System (MMIS) is the computerized system with which all Medicaid claims in Montana are processed, data is accumulated for management analysis and reporting requirements, and payments are made to Medicaid providers. The previous system was first developed in 1987 and had undergone numerous changes over the years to keep it current with changing Medicaid and program requirements. However, only so many changes could be made to a system before it could no longer be kept up-to-date. As the contract for a Fiscal Manager to operate the MMIS was to expire also, the decision was made to design and develop a new system in conjunction with letting a new contract for a Fiscal Manager.

  The new contract for system development and operation was awarded during the previous biennium. The new system design follows the previous system design in that it is a legacy-type system on a mainframe with a PC interface and has the same basic components or subsystems as the old system. However, the new system incorporates many capabilities that were not possible with the old system, plus it has a graphical user interface that makes the system much more user friendly. The new system was implemented and became operational during the current biennium. The contract for fiscal management operation of the new system is for five years, with provisions to extend for an additional four years. The new system improves the efficiency and effectiveness of the fiscal manager staff and the Medicaid program personnel in the Department.

- The Department has developed and implemented the Montana Eligibility and Payment System (MEPS) to provide additional data to Medicaid providers. Eligibility data from the Department's TEAMS system, along with Medicaid Claims data from the MMIS system, are downloaded into a secure Oracle database to which providers have direct access through the Virtual Human Services Pavilion. This allows providers to verify Medicaid clients' eligibility themselves, in real time, saving them time and streamlining the process of providing services. It will also allow them to check the status of Medicaid claims they have submitted to the State for payment without having to call the Department's Medicaid fiscal agent. In addition, the Department is currently working with the Department of Justice to gain access to and share Justice's drivers license information and photograph file. This information will be added to the MEPS system so that providers will be able to view the photo and related information to positively identify a client requesting Medicaid services, while checking on their eligibility. This will reduce the amount of Medicaid fraud by individuals using another's Medicaid card. For more information, see the Department of Justice on page 64.

- The Department extensively revamped their Internet presence. **(http://www.dphhs.state.mt.us)** The following are only a few of the resources available to the public through the Department's web site:
  - General Department information and organization
  - Information on the services provided by the Department
  - Information on what's new in the Department
  - Meeting schedules and minutes
  - Calendar of events
  - Department job openings
  - Legislative updates
  - Legal notices
  - Access to the Virtual Human Services Pavilion
  - Direct e-mail communications with the Department

  Links to the new Health Policy Services Division and the Senior Long Term Care Division web sites were added to this mix of information. This added extensive detailed information relative to these two divisions and the services that they provide. Additional links were established to related external sources such as federal agencies, other Montana government agencies, agencies in other states, and other related programs and web sites of potential interest to Department clients.

  Additional functionality is added to the Department's web site as time and resource availability permits.

ONGOING PROJECTS

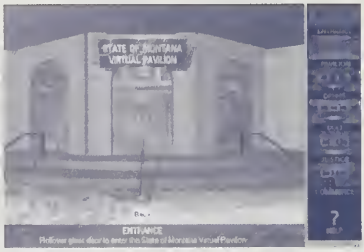
- Virtual Human Services Pavilion (VHSP) – Imagine entering a world where you can access government services directly, without waiting in lines or traveling to government offices. Imagine a common public entry-point to your government, where broad ranges of services are made available with point-and-click ease. Imagine a world where tools and resources that foster self-sufficiency and personal responsibility are placed right at your fingertips. The Department of Public Health and Human Services, in conjunction with the Department of Labor and Industry, is making this a reality, through the development and implementation of the VHSP. Combining the State's existing systems and networks with the latest Internet technologies, the VHSP fulfills the promise of the information age by opening the door for all Montanans to electronically access their government.

  The VHSP relies on user-friendly, point-and-click computer graphics to facilitate data entry and retrieval by the public and by government personnel. Using thin-client technology, the VHSP is a web application featuring a 3D graphic of the State capitol. The user "walks" into the building and sees doors to walk through for the Departments of Labor, Public Health and Human Services, Commerce, the Governor's Office, and the University System. Once in a "room", the individual sees a set of virtual kiosks representing each of the VHSP applications. These graphics provide a one-stop, uniform interface to complex and disparate computer systems, making them both accessible and easy to use. The system is designed to provide an entry-

point for individuals seeking government information and services. Under the system, 70 computer stations in 50 human services offices located throughout the State and eventually in libraries and other public locations, will be the first point of contact for individuals seeking government assistance or information.

The VHSP is designed to eliminate the labor-intensive effort of providing information and processing applications for government assistance by allowing clients to do these functions for themselves, thereby freeing up time available for the eligibility examiners to devote to client counseling.

VHSP, accessible through the Internet, has doors to programs offered by the Departments of Public Health and Human Services and Labor and Industry, the University System, and other state agencies. Using the system, an applicant for public assistance can, among other functions, complete an application for services, review course schedules for the University, browse through job openings and select a day care provider. For more information see **http://vhsp.dphhs.state.mt.us.**



http://vhsp.dphhs.state.mt.us
Virtual Human Services Pavilion web site.

- The Department is initiating the Montana Integrated Data for Evaluation and Assessment (IDEA) Project to provide improved support for the delivery of maternal and child health-related services at the local public health departments and to improve local and state capability for evaluation of program effectiveness. **(http://www.dphhs.state.mt.us/hot/webidea2.htm)** The four-year (1997-2001) IDEA Project is being developed in four phases, with first emphasis on providing local capability for immediate benefit to clients and local health professionals. The phases encompass the following components:

  - Phase I – Develop a comprehensive, robust Public Health Data System (PHDS) for use at local health departments that will be based on the current client case management and tracking capability. The PHDS will initially support four of the public health programs provided at the local level — client case management and tracking, an initiative to serve women with high risk pregnancies, family planning and immunizations — and will have the capability of including other programs as desired. The new software will provide all of the current systems' functionality, add expanded capabilities, support confidentiality standards, and build in all of the user friendliness available in a Windows environment.

  - Phase II – Develop a Common Local Intake which will link the PHDS and other health data systems used at the local level, e.g. Special Supplemental Nutrition Program for Women, Infants and Children (WIC), the CMX system for Family Planning, and the MUMPS system used by the Bureau of Indian Affairs for public health information. The Common Local Intake and interface will provide for the sharing of clients' demographic information (name, address) between all of

these data systems at the local level, eliminating duplicate interviewing and input. Selected clinical and risk information may also be shared.

- Phase III – Develop an IDEA Information Center that will contain selected extracts of the client de-identified data collected at the county level linked with extracts of data from related data systems at the State. The extracts will be designed to provide meaningful information while preserving client confidentiality. Extracts of de-identified data from statewide systems such as Medicaid, Vital Statistics, and Medicaid eligibility determination will be linked with extracts of de-identified local data through the IDEA system. In addition, there will be the capability to link the integrated data extracts with related external health data systems if appropriate.
- Phase IV – Complete full-scale training, support and evaluation components of the first three phases. Develop and extend electronic links with private providers of immunizations, with hospitals providing birth assessment information, and with other divisions' related information systems.

FUTURE DIRECTIONS

- Rather than proceed with the Department's independent effort to develop and implement imaging technology, the Department has opted to participate in the centralized imaging service. During the 2000-2001 biennium, the Department plans to utilize the centralized imaging service if and when it is approved, constructed and becomes operational, and to utilize the services available from the contractor provided for in a new statewide EDMIS contract issued by the Department of Administration. An imaging and document management capability will significantly improve the Department's ability to electronically process documents of all types, as well as providing for safe and long term storage of records and vital statistics. For more information, see Imaging on page 25.
- Because of federal requirements placed on State health services departments, the Department plans to implement an electronic benefits transfer (EBT) process that will utilize electronic information technology to deliver Food Stamp and WIC (Women, Infants, and Children) benefits. The goals are to streamline the benefit issuance and redemption procedures, improve security, and eliminate the costs of producing and handling paper documents.

Public Service Commission

http://www.psc.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The Commission has performed extensive work on their Internet site and the following functionality was added:
  - The ability of regulated industries to register online and to edit this registration information online
  - The ability to search for companies by region
  - The ability to perform price comparison checks for select industries
  - The ability to download forms
  - E-mail list servers for the distribution of documents to regulatory companies and the public
  - These e-mail lists have distributed approximately 200,000 documents in the past 1.5 years. It is an alternative to mailing the documents to requesting parties (PSC saved at least 32¢ x 200,000 documents = $64,000). Through this new technology, the Commission has been able to disseminate these documents to many more parties than in previous years.
  - The ability to submit complaints electronically
  - The ability to receive electronically filed documents through their web site

  The driving force behind these enhancements is twofold.
  - Many of the regulated companies are requesting the ability to perform more functions electronically.
  - The Commission is able to save taxpayer dollars and become more efficient by performing and storing more work electronically.

http://www.psc.state.mt.us
Public Service Commission web site.

- Through their Internet web site and internal office computer systems, the Commission coordinates and releases information about regulated utility companies in the State. This information is utilized by citizens to compare utility companies and prices, to keep abreast of legal actions concerning these companies, and to find contact information for these utility companies.

  By providing this information to the public through an Internet web site, the Commission has reduced the number of telephone calls and the number of requests for information that the Commission deals with daily. Also, by reducing the requests for information, the Commission is saving taxpayers a significant amount of money on postage expenses.

- The Commission completed work on an Intranet site for use by office staff. Some of the systems that have been converted to web interface Intranet systems are:

  - The internal management systems
  - The office checkout system
  - The internal complaint system
  - The internal case management system
  - The e-mail lists that were previously maintained by hand (same database system that is now used by the Internet e-mail lists system)

FUTURE DIRECTIONS

- The Commission will be enhancing its Internet site over the next two bienniums. The main enhancement will be to increase the ability and functionality of the electronic filing of documents. The proposed increased functionality would:

  - Provide for quicker and easier access to documents when they are requested of the Public Service Commission
  - Convert filed documents to PDF format for posting on the web site
  - Enter documents into a Microsoft Access database to provide for both document text searches and document information/subject searches
  - Add the Commission rules as a searchable option on the Commission's web site

Department of Revenue

http://www.state.mt.us/revenue/rev.htm

1998-1999 BIENNIUM PROJECTS

- The Department implemented scannable tax payment coupons. The coupons are scanned and information from the scanned documents is passed to the appropriate systems. Electronic data interchange (EDI) technology was implemented to support the transmission of wage-related data to the IRS under the Simplified Tax And Wage Reporting System (STAWRS).
- The Department collaborated with the Department of Transportation and the Department of Public Health & Human Services on the creation of a data translation facility between PeopleSoft and SBAS.
- The One-Stop Business Licensing Project was created in response to the law passed during the 1997 Legislative Session to pilot a centralized licensing concept, where businesses could obtain or renew most, if not all, of the licenses, fees and permits required by the State of Montana. The pilot project focuses on the specific licensing needs of grocery stores, convenience stores and gasoline stations. Licenses included in the pilot project are business registration, egg license, petroleum dealers license, weighing device license, nursery license, food purveyor license, underground tanks registration, cigarette license, off-premise beer and wine license renewal and employer registration. For more information, see the One-Stop Business Licensing Project on page 8 or **http://www.state.mt.us/onestop.**
- The Predictive Dialer Application aids the Department in the collection of delinquent taxes through the use of an automated calling system. Customer service is increased with this system through more efficient resolution of accounts and the increased ability to contact individuals at home. It also is a service to those taxpayers meeting their obligations to pursue collection of delinquent accounts.
- Several implementations of fax scanning and data collection technology, such as the Liquor Order Automated Data Collection System, were utilized during the biennium. Information is faxed to a location, and then scanned directly into the computer without the information having to be printed out first and then scanned. This saves funds on both materials and personnel costs.
- The New Hire Reporting System was in response to federal law which requires employers to report all new employees to the Office of Child Support Enforcement of the US Health and Human Services Department. When a new employee is reported, the employee's name is searched for in a database of child support "delinquent obligors". This is done to locate parents in arrears for their child support obligations. For more information see **http://www.state.mt.us/revenue/newhire.html**.

- STAWRS was created to simplify the joint federal and state reporting of withholding and unemployment insurance taxes for businesses. The Department received funds from the IRS to utilize electronic commerce techniques, specifically EDI, for this reporting project. The Department also provided software to businesses to assist them in the tracking of wage and withholding information for their employees. STAWRS reduced the number of redundant reports filed by businesses to federal and state agencies, reduced mistakes in the filing processes, and increased the timeliness of tax filings and payments to the State.
- The telefiling of taxes project was ongoing over the past two bienniums. In the last half of the 1996-1997 biennium, there was a 50% increase in the number of individuals filing their taxes electronically. Currently, only the short form can be submitted electronically. Two of the advantages of this technology are that it minimizes the possibilities for mistakes in filing, and it accelerates the refund process.
- The Department's web site won a national award called the Link2Go Award. Tax assistance information is disseminated through the web site, access is provided to downloadable tax forms, phone numbers are listed (such as the "Where's my refund?" Interactive Voice Response phone number), and related web site links are listed.

ONGOING PROJECTS

- A major project undertaken by the Department was the Metamorphosis (META) Project, a comprehensive, long-term change program to transform the way it conducts business. This change encompasses business process reengineering, information systems implementation, and organizational transformation initiatives throughout the Department's offices across the state. The project will be accomplished primarily by moving towards a customer-focused, process-centered organization that integrates business processes and information systems putting a greater focus on customer service.
- Process Oriented and Integrated System (POINTS) is an information technology project to build a process oriented system and integrated database to support the changes that resulted from META. Phase I involves wage based taxes, employer-withholding, and unemployment insurance. Because of this system development, network hardware and support were provided to the POINTS team in the Federal Building, and PC platforms were provided to agency employees to support the next generation of integrated applications.

FUTURE DIRECTIONS

- A goal is to move away from being a tax department to being a true revenue department.
- The Department will implement more electronic tax filing opportunities for businesses and individuals, both directly and through third party preparers. The Department's Internet web site will provide an excellent customer service opportunity for self-filing.
- The Department will rewrite the Oil, Gas and Natural Resource Revenue System to better meet internal customer needs and to be more flexible to accommodate required changes in the future.
- More research will be performed in the electronic commerce area to find more uses for EDI and other electronic commerce technologies. It is envisioned that these technologies will aid businesses to interact electronically, and will assist both government and businesses to reduce costs. The vision is to have electronic commerce become the predominant means of conducting business.
- The One-Stop Business Licensing Project will be expanded to include more licenses and to benefit more types of businesses. During the expansion, research will be performed to increase the public's ability to serve themselves when obtaining business licenses and related information.
- Many internal systems will be modified to take advantage of the managed systems approach to information technology systems. This approach will help the Department perform a better job of servicing State customers, increase their business process effectiveness, create a comprehensive help desk system to better perform problem management, provide better statistics on the service given to customers, and utilize a prioritization system when serving the Department's customers.

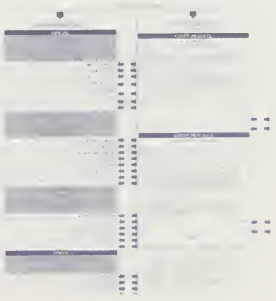
Telefiling of taxes is becoming more convenient.

Office of the Secretary of State

http://www.state.mt.us/sos/index.htm

1998-1999 BIENNIUM PROJECTS

- Converted to Windows 95.
- The Office worked in cooperation with the Department of Revenue to include the Secretary's Assumed Business Name registration in the One-Stop Business Licensing Project. For more information, see page 8 or **http://www.state.mt.us/onestop**.
- A Centralized Voter File System was created to centrally store registered voter information from the counties throughout the State. This project was mandated by legislation from the 1997 Legislative Session and provides the public with one location to purchase voter registration information for non-commercial purposes.
- The Office expanded their web site in response to customer requests for additional functionality. Business and voter registration forms were made available for downloading and candidate filing and election results were posted on the web site.
- Research was completed to determine options relating to electronically providing the Administrative Rules of Montana (ARM). The feasibility of options such as providing the manual on the Internet, allowing agencies to submit their administrative rules electronically, and allowing agencies to update their sections of the ARM electronically was investigated.



The Secretary of State's Office is the central repository for election information.

ONGOING PROJECTS

- A major project during the biennium was a rewrite of the OPPEN/UCC system. The new UCC System is the initial client/server component of the Office Public/Private Enterprise Network (OPPEN) initiative. The OPPEN initiative is an Office-wide, phased effort to integrate key business processes within the Office. The capabilities of OPPEN will assist with providing higher quality customer service by reducing manual and redundant functions and increasing access to a wide variety of data and information maintained by the Office.
- Over the biennium, the Office was involved in committees and other research efforts pertaining to electronic commerce issues. The Office is committed to furthering the State's involvement in electronic commerce. They realize that electronic commerce is key to ensuring a good relationship with the private sector and for encouraging further business development in the State. Many possible implementations that would be beneficial to the office's customers were investigated.

The Office will introduce electronic commerce legislation during the 1999 Legislative Session. The goals of the legislation will include encouraging agency use of all forms of electronic commerce, encouraging economic development by providing for a registration of certifying authorities to ensure electronic signature validity and ensuring that legislation remain flexible to the ever-changing technological field. For more information, see Electronic Commerce on page 19.

FUTURE DIRECTIONS

- The general election of 2000 will mark the first election since the passage of term limits in 1992. As a result, all of the State's constitutional officers will be replaced. In addition, term limits will effect the races in the State legislature. The Office of the Secretary of State recognizes that information technology initiatives beyond the 2000 election will be driven by the new administration elected during that election.
- During the next two bienniums, the current Office administration anticipates having the OPPEN/UCC Project fully completed.
- Future projects will focus on developing client/server applications for other business processes in the Office such as Corporations, Elections and Notary. The office will also provide increasing access to information through their Internet web site.
- The Office will research electronic commerce issues such as providing customers the ability to request, pay for and receive services through their web site and the feasibility of using electronic data interchange (EDI) to collect business information.
- Due to the Capitol Renovation Project scheduled to last through the 1999-2000 interim, the Office may be relocated to an offsite office facility. If this temporary relocation occurs, the Office's staff may be required to install additional hardware and software to continue operations in a networked environment.
- The Office will continue positioning itself to apply newer technologies, such as document management, imaging, electronic data interchange (EDI) and electronic commerce (EC), when it is cost effective and beneficial to the Office and customers.

Office of the State Auditor

http://www.state.mt.us/sao/index.html

1998-1999 BIENNIUM PROJECTS

- One of the major accomplishments for the Office was added functionality to their web site. The web site includes pertinent news stories, investor information, contact information, downloadable forms, and accredited reinsurer listings.

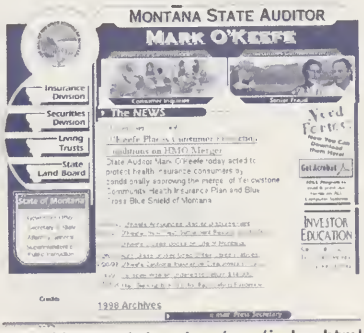
ONGOING PROJECTS

- The Office rewrote their Insurance and Securities system. This system automates the collection of insurance premium taxes and manages the continuing education requirements for insurance and license renewals. The insurance portion of the system was implemented in this biennium, but the securities portion will be implemented in the next biennium.

  The system was previously written in Q Basic and is being converted to Oracle. The goal of the conversion is to increase the timeliness and accuracy of the system, to take advantage of newer technologies, and to be Year 2000 compliant. As a result of the utilization of Oracle technology in this system and the implementation of other hardware intensive applications across the State network, the need arose to upgrade many of the office's desktop computers. Thus, many of the computers in the office have been upgraded and there are plans to upgrade others to accommodate the increased demand.

FUTURE DIRECTIONS

- The Office will be researching the ability to allow for submission of information through their web site. This could entail the filing of complaints or the registering of individuals for licenses of numerous types. The Office will also be performing enhancements to their systems by increasing their connections to outside data sources, increasing their use of outside data sources, enabling outside entities to have access to internal databases, integrating national systems with internal systems, and creating mixed language applications. The goal of the Office is to use technology to improve all of the basic things they do.



http://www.state.mt.us/sao/index.html
State Auditor's Office web site.

State Compensation Insurance Fund Division

http://stfund.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The Benefits Information System (BIS) and the Automated Medical Payment System (AMPS) were rewritten to take advantage of PC platform technologies such as Oracle. The system previously resided on a mainframe. The Policy Audit, Accounting, and Loss control System (PAALS), which integrates with the BIS/AMPS system, was also rewritten from a mainframe platform to an Oracle client/server platform.

  With the rewrites, the Division provided themselves with increasingly integrated insurance systems. This integration allows the office more flexibility in the underwriting or pricing of policies, provides clients with the ability to use staggered entry and exit dates within insurance policies, provides for better loss control tracking, allows dividends to be paid to insured clients, creates an environment where discounts may be provided to clients who belong to groups, and allows the office to electronically transfer premium payment funds to insured clients.

  Significant modifications were made to the BIS/AMPS and PAALS systems during the 1998-1999 biennium to make them Year 2000 compliant.

- With emphasis being placed on the Internet and more functionality being provided by Internet and Intranet applications, the State Fund began to provide material to their customers through this media. On the Intranet side, more information was provided to employees such as policies, procedures, and training information. On the Internet side, the office began to provide clients with information on the claim process, office and contact information, and on job opportunities.

  Another Internet project that was completed, was that the Agent Commission Tracking System (ACTS) was given an Internet interface so authorized agents could access the system online.

http://stfund.state.mt.us
State Fund web site.

- Performed a major imaging project of all claim files. Over two million pieces of paper were imaged and placed into the system. This document imaging and workflow system provides information in all phases of the claim process and has made the claim process in the office a completely paperless process.
- The Division became the first entity to electronically submit initial claim reports to the Department of Labor and Industry. This information assists government offices in the prevention of fraud in the worker's compensation insurance system. The Division also provided medical and pharmacy information and forms in electronic format to their clients through an Internet web site
- Improved the Fraud Detection program
- Replaced the local area network infrastructure with an ethernet infrastructure to provide quicker response time, to provide more redundant/reliable services, and to improve the office's ability to respond to clients in the most efficient way possible
- Purchased a new server
- Replaced all PCs in the office
- Replaced the optical jukebox to manage the new imaging and workflow system
- Installed Microsoft Windows NT on all computers in the Helena office

FUTURE DIRECTIONS

- The Division will be providing more services through their Internet web site. Many of the insurance, application, and payroll reporting forms will be made available for download. This will possibly provide many individuals in remote locations in Montana the forms necessary to file a worker's compensation claim.
- The Division will research Data Warehousing technology that will:
  - Make it easier for agents to query information on customers.
  - Provide the ability to perform ad hoc queries and to create reports of client information for analysis purposes.
  - Allow key clients to access and query their information electronically.
  - Allow implementation of management performance measures.

State Library

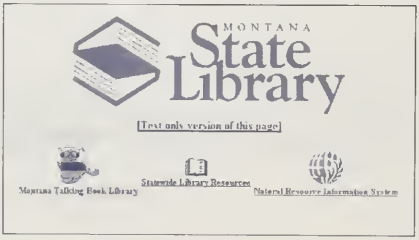
http://msl.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The State Library deployed interactive Internet geographic information systems (GIS) to allow individuals to view GIS information before downloading the information. Because of these applications, the Library created an expanded number of GIS subsets and metadata files for the free GIS clearinghouse the library provides to the public.
- The State Library implemented an electronic full-text periodical database and provided licenses for the system to public, school, academic, and agency libraries. The database is centrally located at the Library and is accessible through SummitNet.
- Internet access was provided to many libraries throughout the State.
- A new State documents server offering free electronic access to State documents from many different agencies was put into production.
- An Internet interface was implemented to the Library's public holdings catalog. The catalog provides online access to see what items the Library has on-site.
- A CD tower went into production for patrons and library staff to easily access library resources such as grant search CDs, business information CDs, and research CDs.

FUTURE DIRECTIONS

- The Library currently has a great deal of time invested in the UNIX operating system and Sybase database software. However, because of state standards and upkeep costs associated with these applications, the library will be converting selected portions of their operations to Microsoft NT and the Oracle database software package.



http://msl.state.mt.us
The State Library's web site.

Department of Transportation

http://www.mdt.state.mt.us

1998-1999 BIENNIUM PROJECTS

- The Department implemented a comprehensive Roadway Imaging System (RIS) linked to their Transportation Information System (TIS) and Geographic Information System (GIS). In addition, a Right of Way Document Management System has been implemented which provides immediate electronic access to parcel owner documents such as deeds throughout the Department's distributed offices in the State. This is one of the systems planned to link to the Montana Cadastral Database Project. For more information, see Geographic Information Systems on page 14.

  Moved RIS into full production and integrated it with the Departmental GIS and TIS. Over four million images of roadway have already been loaded into the imaging system. All Department offices throughout Montana can directly use these systems.

- Explored opportunities to use EDI, EFT, telefiling, and other electronic services where they would assist the Department in the processing of contractor-bid-letting materials, collecting of licensing and permitting fees, revenue collections and refunds processing and in providing access to other departmental information.

- Completed the permitting application for weigh stations. This application included a distributed Oracle database and has set the stage for enabling access through the Internet.

One of the Department's Remote Weather Information Systems.

- Developed and integrated the new Roadlog, Railroad Crossing, Congestion Management and Safety Management systems into RIS and TIS.

- Implemented a Document Imaging System using the Oracle RDBMS. Records such as land records, deeds, and right of way parcel negotiation forms are scanned into this system (ultimately over three million document images in total) and are available for retrieval by Department staff throughout the geographically dispersed department.

- Began study for the MT PRRIME interface work for major applications that currently provide information to or utilize information from the SBAS and PPP systems. For example, this will include interfacing the Department's payroll processing system that supports project and cost accounting with MT PRRIME's human resource payroll system that does not support project and cost accounting.

- Implemented an Electronic Bid system (AASHTO's EXPEDITE) that allows contractors bidding on projects to electronically enter their bids per bid item. A related system was developed and provides Internet access to related electronic bid and project forms.

- The Remote Weather Informational System (RWIS) was completed including an Internet interface. RWIS consists of 59 sites across the State and provides real time information through standard communication tools (phone lines and computer networks) statewide. These sites are located in strategic locations to provide accurate real time weather information. This information allows Department personnel to schedule personnel and equipment based on current weather and pavement surface conditions. Real time weather information improves response time, increases winter maintenance efficiency and minimizes the traveling public's exposure to hazardous weather related roadway conditions.

  Beginning with the winter road and weather-reporting season for 1998, GIS image maps will be included in this system and made accessible through the Internet. This will increase the visual connection between weather reports and a section of road within the State. The Department is working with Travel Montana to provide road and weather information through the use of Travel Montana's kiosks. These kiosks reside in many locations throughout the State and provide a means of easily disseminating this information to more of the public. For more information **http://www.mdt.state.mt.us/maintenance/mdtrwis.html.**

- TIS is a set of interrelated automated systems (e.g. Roadlog, Traffic, Accidents, Congestion, Pavement) which support operational and management decision processes. The core of TIS contains the anchoring mechanisms that are used to "bind" their automated systems together. This framework includes components like base routes, corridors, nodes, links, points and segments. In addition, TIS "common services" have been developed which are utilized by automated systems "bound" through these TIS anchoring mechanisms. Examples of TIS "common services" include GIS utilization, roadway-imaging access, dynamic segmentation, querying, network management, linear referencing, coordinates referencing and much more. TIS "anchoring mechanisms" and "common services" together represent the body of the Department's TIS Standards.

  Flexibility is an important characteristic of automated systems "bound" and "serviced" through TIS standards. Information can be shared or correlated dynamically between automated systems (e.g. between Pavement Management and Maintenance Management). Likewise, new information and data elements can be added with minimal effort on the part of technical support staff.

  TIS minimizes the risk of future system implementations and enhancements by ensuring that the Department maintains the ability to support all systems developed in accordance with TIS standards. The "common services" that TIS provide allows new system development to occur without having to design, code, and test entire services that are basically the same for every transportation management system. Not only does coding not have to occur, but benefits from enhancements are

realized by all management systems using these services. Duplication of effort is nearly eliminated as TIS compatible systems are deployed.

The Total Cost of Ownership (TCO) for an application system increases explosively with every new technology implemented. However, when using homogeneous technology throughout an organization, development costs, deployment costs, support costs, training costs, and maintenance costs are all minimized. These costs are always far less than the sum of these same costs for implementing heterogeneous systems. Total Cost of Ownership is critical to determining the business value of a system, however, Total Benefit of Ownership is just as critical.

Total Benefit of Ownership involves the analysis of both the tactical and strategic advantages gained from implementation of a technology. Traditionally, tightly integrating systems throughout an enterprise severely limited the ability to innovate technological approaches and improve business processes. Data maintenance, which requires both technical and business knowledge to perform effectively, becomes extremely difficult as disparate groups are responsible for different aspects of the system. Without integration, however, the cost of ownership of a technological infrastructure skyrockets and many benefits of technology enhanced systems, such as data sharing, are not realized. In contrast, "TIS standards" provide all the benefits of system integration through "anchoring mechanisms" and "common services" without many of the shortcomings. Along with the use of client/server architecture, the set of technological standards that form the backbone of TIS ensure that communication between systems can be easily achieved.

What is a TIS Common Service? A common service is a repeatable automated activity that can be shared by independent automated systems. A common service may be a transportation network administration tool such as add a node or link, or a more complex requirement like adjust the network due to a realignment. There are a wide variety of TIS common services. For any independent automated system to directly use any particular TIS common service, it must follow the standards for that particular service.

The relationship of one common service to another can offer robust benefits as well. In many cases, outputs from one service may become inputs for other services. For example, the TIS common service "dynamic segmentation" could be used to correlate information from Pavement Management, Congestion Management, Roadlog and Maintenance Management systems. The information derived (output) by this service could then be accessed (input) by other common services such as GIS, roadway imaging, tabular reporting or for further querying.

ONGOING PROJECTS

- The Department is moving towards developing a full scale Intelligent Transportation Systems (ITS) program throughout Montana. The Department is already involved in a number of ITS applications including SCAN Remote Weather Monitoring Systems (RWIS), advanced traffic control, and Weigh-In-Motion (WIM). Through the use of advanced sensor and computer technology, WIM systems measure the weight of vehicles at highway speed.

  ITS applications under development or consideration include electronic traveler information kiosks (in coordination with Travel Montana), ride matching in the Bitterroot Valley (carpooling), and the Department of Justice's (Highway Patrol) testing of on-board computers that will allow enforcement personnel to quickly run license plate checks and access important information about individuals.

  Montana is the recipient of a one million dollar congressional earmark for various ITS activities on the Greater Yellowstone Rural ITS Corridor and at the Coutts/Sweetgrass international border crossing. The work will be accomplished in cooperation with the Western Transportation Institute (WTI) at the Montana State University.

  The Greater Yellowstone Project, an ongoing project, researched and identified numerous ITS technologies that would benefit Montana. This is a cooperative effort between the Department of Transportation, the Department of Commerce, Montana State University (WTI), the Yellowstone Park Service, and the States of Idaho and Wyoming, through an ITS partnership arrangement. For more information, see **http://www.mdt.state.mt.us/planning/its.html**.

- The Coutts/Sweetgrass Project is a cooperative effort between the Montana Department of Transportation and the Canadian Transportation Service. The technologies necessary to implement Weigh-In-Motion sites on both the American and Canadian sides of the border were implemented. Before the systems can be finalized, a political reconciliation of weigh station bypass criteria differences between the State of Montana and the Province of Alberta needs to be agreed on.

  The Department deployed a weigh station automation system near Culbertson, Montana to provide commercial vehicle enforcement. Automation of this facility also provides the local community with a more efficient commercial traffic flow. The system comprises a WIM subsystem to screen potential weight violators, changeable message signs to direct potential violators to the weigh station facility and cameras and television monitors to allow weigh station officers to remotely observe vehicles. The system also provides officers with the ability to direct size or weight non-compliant vehicles into the weigh station.

One of the Department's many weigh stations in the state.

Over the past two-years, the Department and Heavy Vehicle Electronic License Plate (HELP) signed a "memorandum of understanding" formally committing Montana to the HELP PrePass™ program. HELP Inc. is a public/private partnership, non-profit organization with representation by State members, the commercial trucking organizations and Lockheed-Martin Corporation. As the weigh station bypass system of choice, the PrePass™ system uses WIM technology in conjunction with AVI (Automatic Vehicle Identification) subsystems to identify and permit pre-authorized trucks to bypass weigh stations. Transponder outfitted commercial vehicles that are deemed weight compliant by the WIM subsystem receive an electronic signal giving the driver a "green light" to bypass a weigh station.

The Department has committed funds for the first two PrePass™ sites scheduled for construction over the next two years. Construction of the first bypass site at Lima on I-15 is due for completion by summer's end 1998. A second site scheduled for construction on I-90 near Billings will automate both Mossmain weigh stations, which should be operational during the forthcoming biennium.

The Department is currently seeking federal funds from Federal Highway Administration (FHWA) to automate five additional weigh stations with PrePass™. The funding request submitted through a proposal would establish a program called State Truck Activities Reporting System (STARS). STARS will automate and enhance the federal reporting requirements used for certifying Montana's commercial vehicle size and weight enforcement program. Among the many expected benefits for the Department, STARS will provide continuous real-time information necessary to monitor statewide vehicle size and weight activities, thus enhancing enforcement capabilities. Using information generated by the PrePass™ and other systems, STARS will use computers, networks and advanced communications technologies to accomplish its goals. Over the 2000-2001 biennium, the Department anticipates that FHWA will grant the funds using a phased approach and the Department has committed the necessary State match portion. The Department of Transportation anticipates that one-third of the funds will be made available in the biennium.

FUTURE DIRECTIONS

- The Department will implement electronic commerce (EC) technology to enable electronic submission of contractor's bids. They will also research EFT technology, in conjunction with EDI, to allow motor carriers to self issue permits and for motor carrier licensing, motor fuels revenue collections and refunds processing.
- The Department will implement wide area network (WAN) connectivity throughout the State for all Transportation Maintenance Section Houses (approximately 110 sites). Additional connectivity is being explored for the Department's wide variety of customers. Motor fuel distributors, contractors, local governments and the federal government are all examples of customers. Connectivity approaches and mechanisms are being researched and will be agreed upon with the Department of Administration.

- The Department will replace the Maintenance Management System that is fifteen years old. This system assists maintenance crews in the planning and reporting of every aspect of their maintenance work. Biennium budgeting processes are supported by this system as well.
- The Department will deploy new Contracts Management/Progress Estimates systems. These systems manage construction contracts, bid items, quality assurance, construction progress, and contractor payments.
- The Department plans to rewrite their Construction Management System. This system assists the Department with the biennial budget analysis and preparation, project resource allocation, and in the comparison and analysis of construction projects for maintaining the planning standards.
- The Department plans to redevelop many of their financial systems. Project and cost accounting supports the core requirements of their financial systems. Federal reimbursements and many of their management systems use these core financial accounting mechanisms. Project and cost accounting will be linked in with MT PRRIME capabilities.
- The Department plans to upgrade many of their local area networks (LANs) because of increased network traffic and the expected demand for video conferencing and other bandwidth intensive applications.
- The Department will continue research of the latest palm held computer devices and determine how they might assist remote employees and employees performing mobile activities on a part time basis. These devices may be able to support portions of the Department's remote data capture requirements, communications needs (e-mail, calendaring/scheduling) and more.
- The Department will perform ongoing research of the approaches and mechanisms for supporting the remote transmission of data such as cellular technology, wireless ethernet, satellite communications, value added networks, fiber optic networks supported by private industry and more. Outside of testing and pilot projects, all approaches and mechanisms will be agreed on with the Department of Administration prior to production deployment.
- The Department will be implementing additional document management and data warehousing technologies throughout the Department.
- The Department plans to deploy a new Preconstruction Management System within the 2000-2001 biennium. This system manages all activities related to the engineering design processes for construction projects.
- The Department will continue development of the TIS throughout the biennium.

Administration

1998-1999 BIENNIUM PROJECTS
- MT PRRIME
- PARIS
- Montana Public Vehicle Fueling Program
- Peregrine's Service Center

ONGOING PROJECTS
- Centralized Imaging Service
- Montana Cadastral Database Project
- METNET Enhancements

FUTURE DIRECTIONS
- Public Safety Radio System
- Inter-Governmental IT Coordination Services

Agriculture

1998-1999 BIENNIUM PROJECTS
- One-Stop Business Licensing Project Participant

FUTURE DIRECTIONS
- Database System Conversions

Commerce

ONGOING PROJECTS
- Montana Lottery System
- Database System Conversions
- One-Stop Business Licensing Project Participant

FUTURE DIRECTIONS
- Remote Field Inspection System
- Centralized Imaging Service Participant

Commissioner of Higher Education

1998-1999 BIENNIUM PROJECTS
- Distributed Learning System

ONGOING PROJECTS
- Banner System

Commissioner of Political Practices

1998-1999 BIENNIUM PROJECTS
- Internal Reporting System Enhancements

FUTURE DIRECTIONS
- Centralized Imaging Service Participant
- Electronic Filing and Reporting Systems

Corrections

1998-1999 BIENNIUM PROJECTS
- Justice Criminal History Records Interface
- VINE System

ONGOING PROJECTS
- ACIS Enhancements
- LiveScan Fingerprinting Analysis System
- Digital Mugshot System

FUTURE DIRECTIONS
- Video Conferencing System

Environmental Quality

1998-1999 BIENNIUM PROJECTS
- Remote Dialup System Enhancements
- MT PRRIME Interface Systems
- One-Stop Business Licensing Project Participant

ONGOING PROJECTS
- Database System Centralization

Fish, Wildlife & Parks

1998-1999 BIENNIUM PROJECTS
- Smith River Drawing System
- Hunter Education System

ONGOING PROJECTS
- Automated Licensing System

FUTURE DIRECTIONS
- Sportsman's Database Conversion
- Database System Conversions

Governor's Office

1998-1999 BIENNIUM PROJECTS
- MIBS Enhancements

ONGOING PROJECTS
- MBARS

FUTURE DIRECTIONS
- Centralized Imaging Service Participant

Historical Society

1998-1999 BIENNIUM PROJECTS
- Society Catalog Online Ordering System

ONGOING PROJECTS
- Antiquities Database System Conversion

FUTURE DIRECTIONS
- Tour Schedule Coordination System
- Retailer System
- Automated Timecard System

Judicial Branch

1998-1999 BIENNIUM PROJECTS
- Electronic Card Catalog System
- District Court Action Database

ONGOING PROJECTS
- Judicial Case Management System Enhancements

FUTURE DIRECTIONS
- Jury Pool Sharing System
- Statewide District Court Database System
- Statewide District Court Calendar System
- Electronic Filing System
- Centralized Imaging Service Participant
- DOARS
- Video Arraignment System

Justice

1998-1999 BIENNIUM PROJECTS
- Title and Registration System Enhancements
- CJIN Enhancements
- MCJISP
- Mobile Data Terminal Pilot Project
- CODIS

ONGOING PROJECTS
- FBI's NCIC 2000 Project Participant
- Automated Lien Filing Pilot Project
- Criminal History Improvement Project
- LiveScan Fingerprinting Analysis System
- LIMS

FUTURE DIRECTIONS
- Automated Accounting and Reporting Project
- Fingerprinting Sharing System

Labor and Industry

1998-1999 BIENNIUM PROJECTS
- WCAP Enhancements
- Montana Job Source
- Electronic Prior Claims System
- Case Tracking System
- MT PRRIME Interface Systems
- Electronic Document System

ONGOING PROJECTS
- MISTICS

FUTURE DIRECTIONS
- Centralized Imaging Service Participant

Legislative Branch

1998-1999 BIENNIUM PROJECTS
- LAWS
- SBAS Audit System Enhancements
- Information Request System

Livestock

1998-1999 BIENNIUM PROJECTS
- One-Stop Business Licensing Project Participant

ONGOING PROJECTS
- Database System Conversions

FUTURE DIRECTIONS
- Montana Livestock Brands System Enhancements

Military Affairs

ONGOING PROJECTS
- Cooperative Distance Learning Project

Montana Arts Council

1998-1999 BIENNIUM PROJECTS
- Grants Database System Enhancements

FUTURE DIRECTIONS
- Online Artists Registry

Natural Resources and Conservation

1998-1999 BIENNIUM PROJECTS
- Database System Conversions
- Water Rights Database Enhancements

ONGOING PROJECTS
- GIS Database Systems

FUTURE DIRECTIONS
- Online Registration System

Public Instruction

1998-1999 BIENNIUM PROJECTS
- METNET Bulletin Board System Enhancements

ONGOING PROJECTS
- MAEFAIRS Enhancements
- Database System Conversions

FUTURE DIRECTIONS
- Northwest Educational Technology Consortium Project Participant

Public Health and Human Services

1998-1999 BIENNIUM PROJECTS
- MEDSTAT Panorama View
- MMIS Enhancements
- ADIOS
- Health Laboratory Information System
- HEAT System
- MEPS
- Montana Central Database System
- One-Stop Business Licensing Project Participant

ONGOING PROJECTS
- Virtual Human Services Pavilion
- Montana IDEA Project

FUTURE DIRECTIONS
- Electronic Benefits Transfer System
- Centralized Imaging Service Participant

Public Service Commission

1998-1999 BIENNIUM PROJECTS
- Online Registration System
- Electronic Complaint Submission System

FUTURE DIRECTIONS
- Electronic Document Filing System

Revenue

1998-1999 BIENNIUM PROJECTS
- New Hire Reporting System
- STAWRS
- Telefile Tax System
- Predictive Dialer System
- One-Stop Business Licensing Project
- MT PRRIME Interface Systems
- Liquor Order Automated Data Collection System Enhancements

ONGOING PROJECTS
- META Project
- POINTS

FUTURE DIRECTIONS
- Oil, Gas, and Natural Resource Revenue System Enhancements
- One-Stop Business Licensing Project Expansion
- Electronic Tax Filing System Enhancements

Secretary of State

1998-1999 BIENNIUM PROJECTS
- One-Stop Business Licensing Project Participant
- Centralized Voter File System

ONGOING PROJECTS
- OPPEN/UCC System

FUTURE DIRECTIONS
- Electronic Commerce Systems
- Centralized Imaging Service Participant

State Auditor

ONGOING PROJECTS
- Insurance and Securities System

FUTURE DIRECTIONS
- Internet License Registrations

State Fund

1998-1999 BIENNIUM PROJECTS
- Benefits Information System Enhancements
- Fraud Detection System Enhancements
- Automated Medical Payment System Enhancements
- Policy Audit, Accounting, and Loss Control System Enhancements
- Claim Files Imaging Project
- Agent Commission Tracking System Enhancements

FUTURE DIRECTIONS
- Data Warehousing System Enhancements

State Library

1998-1999 BIENNIUM PROJECTS
- State Documents System
- Public Holdings Catalog System Enhancements
- Full Text Periodical Database

FUTURE DIRECTIONS
- Database System Conversions

Transportation

1998-1999 BIENNIUM PROJECTS
- Roadway Imaging System
- Weigh Station Permitting Application System
- Right of Way Document Management System
- RWIS
- Document Imaging System
- AASHTO's EXPEDITE
- Fuel Tax System Enhancements
- MT PRRIME Interface Systems
- TIS

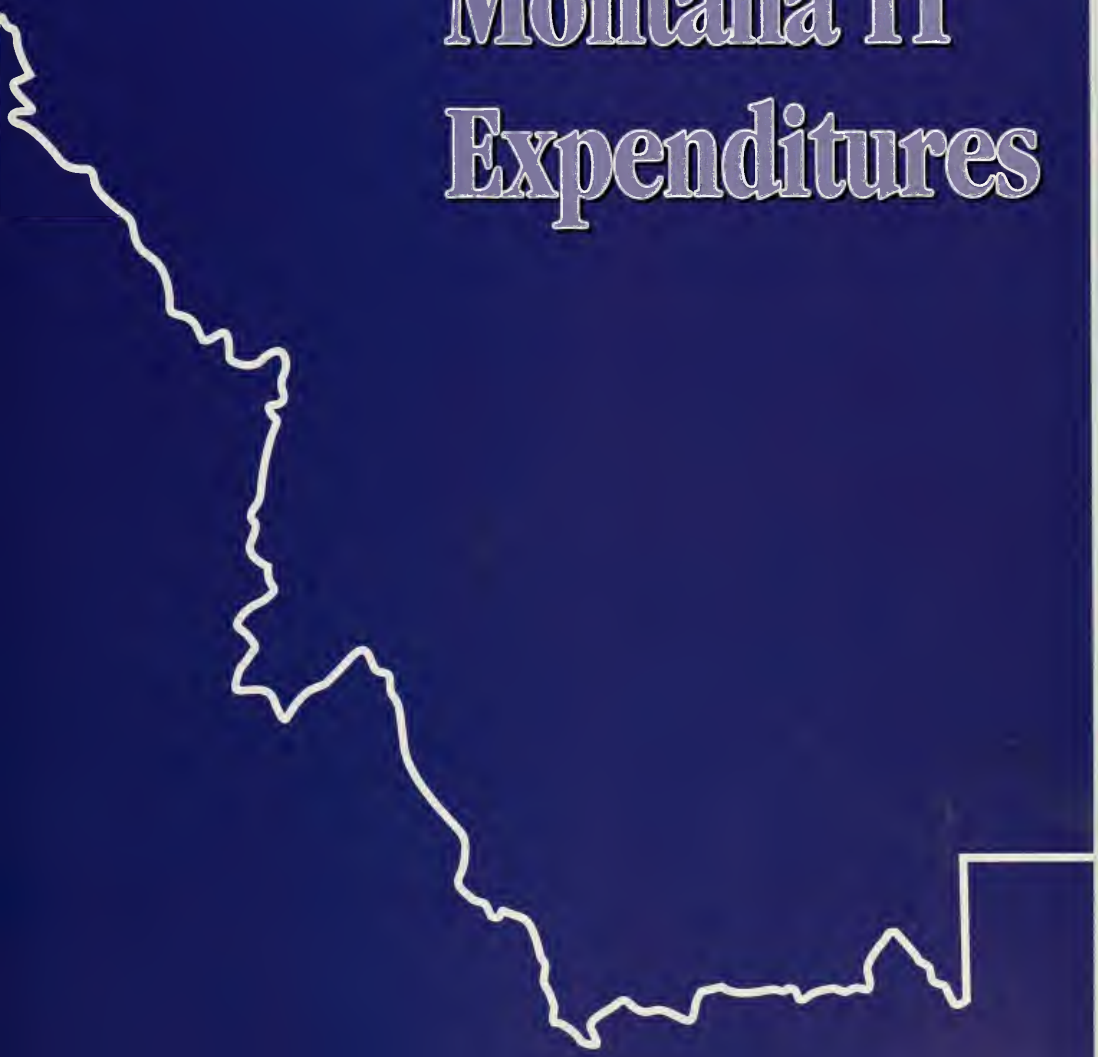
ONGOING PROJECTS
- Weigh In Motion System
- ITS Enhancements

FUTURE DIRECTIONS
- Information Management and Financial System Enhancements
- Document Management and Data Warehousing
- Construction Management System Enhancements
- Preconstruction Management System Enhancements
- Maintenance Management System Enhancements
- Contracts Management/Process Estimates System Enhancements

- The Department will replace the Maintenance Management System that is fifteen years old. This system assists maintenance crews in the planning and reporting of every aspect of their maintenance work. Biennium budgeting processes are supported by this system as well.
- The Department will deploy new Contracts Management/Progress Estimates systems. These systems manage construction contracts, bid items, quality assurance, construction progress, and contractor payments.
- The Department plans to rewrite their Construction Management System. This system assists the Department with the biennial budget analysis and preparation, project resource allocation, and in the comparison and analysis of construction projects for maintaining the planning standards.
- The Department plans to redevelop many of their financial systems. Project and cost accounting supports the core requirements of their financial systems. Federal reimbursements and many of their management systems use these core financial accounting mechanisms. Project and cost accounting will be linked in with MT PRRIME capabilities.
- The Department plans to upgrade many of their local area networks (LANs) because of increased network traffic and the expected demand for video conferencing and other bandwidth intensive applications.
- The Department will continue research of the latest palm held computer devices and determine how they might assist remote employees and employees performing mobile activities on a part time basis. These devices may be able to support portions of the Department's remote data capture requirements, communications needs (e-mail, calendaring/scheduling) and more.
- The Department will perform ongoing research of the approaches and mechanisms for supporting the remote transmission of data such as cellular technology, wireless ethernet, satellite communications, value added networks, fiber optic networks supported by private industry and more. Outside of testing and pilot projects, all approaches and mechanisms will be agreed on with the Department of Administration prior to production deployment.
- The Department will be implementing additional document management and data warehousing technologies throughout the Department.
- The Department plans to deploy a new Preconstruction Management System within the 2000-2001 biennium. This system manages all activities related to the engineering design processes for construction projects.
- The Department will continue development of the TIS throughout the biennium.

Overview of Agency System Projects

State of Montana IT Expenditures



State of Montana IT Expenditures

The data shown in Figures 1-3 of this section detail expenditures from the executive, legislative, and judicial branches of state government; not included in these figures are the expenditures of the Office of Public Instruction, the Commissioner of Higher Education, and the University System and its extension services. The following total expenditure data was obtained from Fiscal Year 1998 expenditures obtained from the Statewide Budget and Accounting System and the Legislative Fiscal Division. Due to variations in agencies' use of object (cost) codes, the data provided in these figures should be considered representative but not all-inclusive.

IT EXPENDITURE CATEGORIES

In Figures 1 and 2, the fiscal-year totals have been subdivided as follows: Personal Services, Training, Hardware, Software, Telecommunications, Maintenance, Contracted Services, and Miscellaneous. These spending categories are described in detail below.

PERSONAL SERVICES

The Personal Services bar represents the personnel expenditures from the three branches of state government. It should be noted that this expenditure reflects only state employees directly involved in providing IT services. Although many other state employees who are not classified as IT personnel indirectly perform IT functions, they are not represented in Figures 1 and 2.

TRAINING

The Training bar includes IT training and education expenditures.

HARDWARE, SOFTWARE, TELECOMMUNICATIONS, AND MAINTENANCE

These categories represent expenditures for IT assets, facilities, and support. This includes: mainframe, mid-tier, and PC hardware and software; local and wide-area hardware, software, and facilities; and local and long-distance voice circuits and maintenance contracts.

CONTRACTED SERVICES

This category represents contracted IT consulting services, application system development, and programming services.

MISCELLANEOUS

These expenditures consist of data processing supplies such as paper, printing, microfilm, subscriptions, recruiting, and rent.

IT Expenditure Analysis

The total statewide IT expenditures for Fiscal Year 1998 were approximately $71.9 million. See Figure 1 for the breakdown of this number.

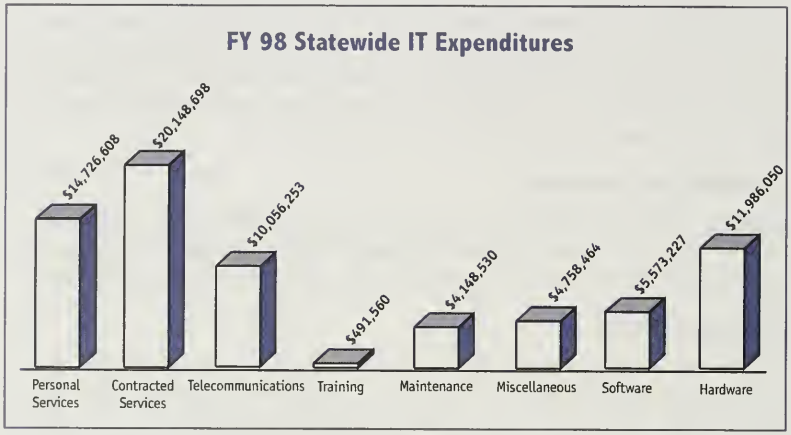


Figure 1

Figure 2 represents statewide IT expenditures with spending subcategories shown by percentage.

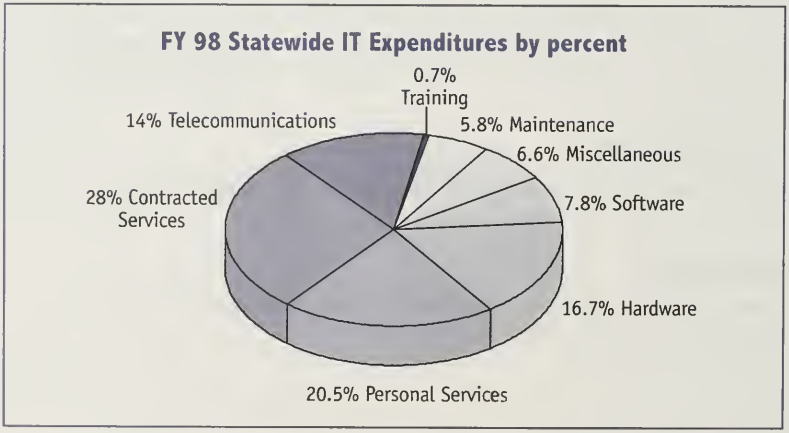


Figure 2

In Figure 3, statewide IT expenditures are represented as a percentage of total statewide expenditures for Fiscal Year 1998 (as provided by the Legislative Fiscal Division).

Note that IT expenditures account for 4.12% of the total expenditure of funds during this time frame. This is below the national average for state government IT spending levels for the same timeframe: 5.26%[1].

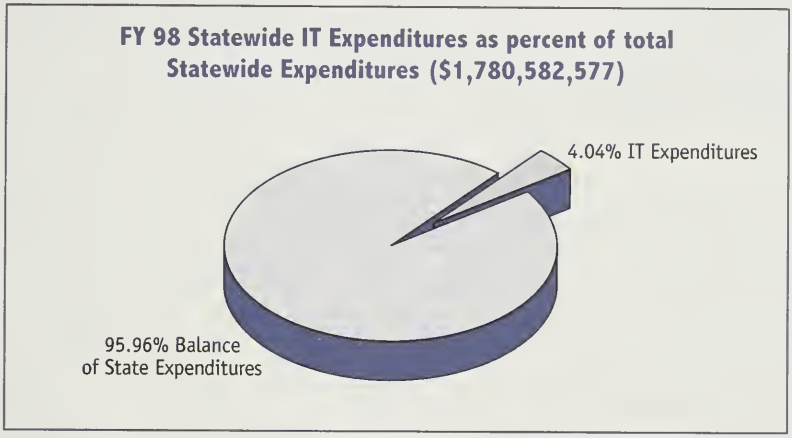
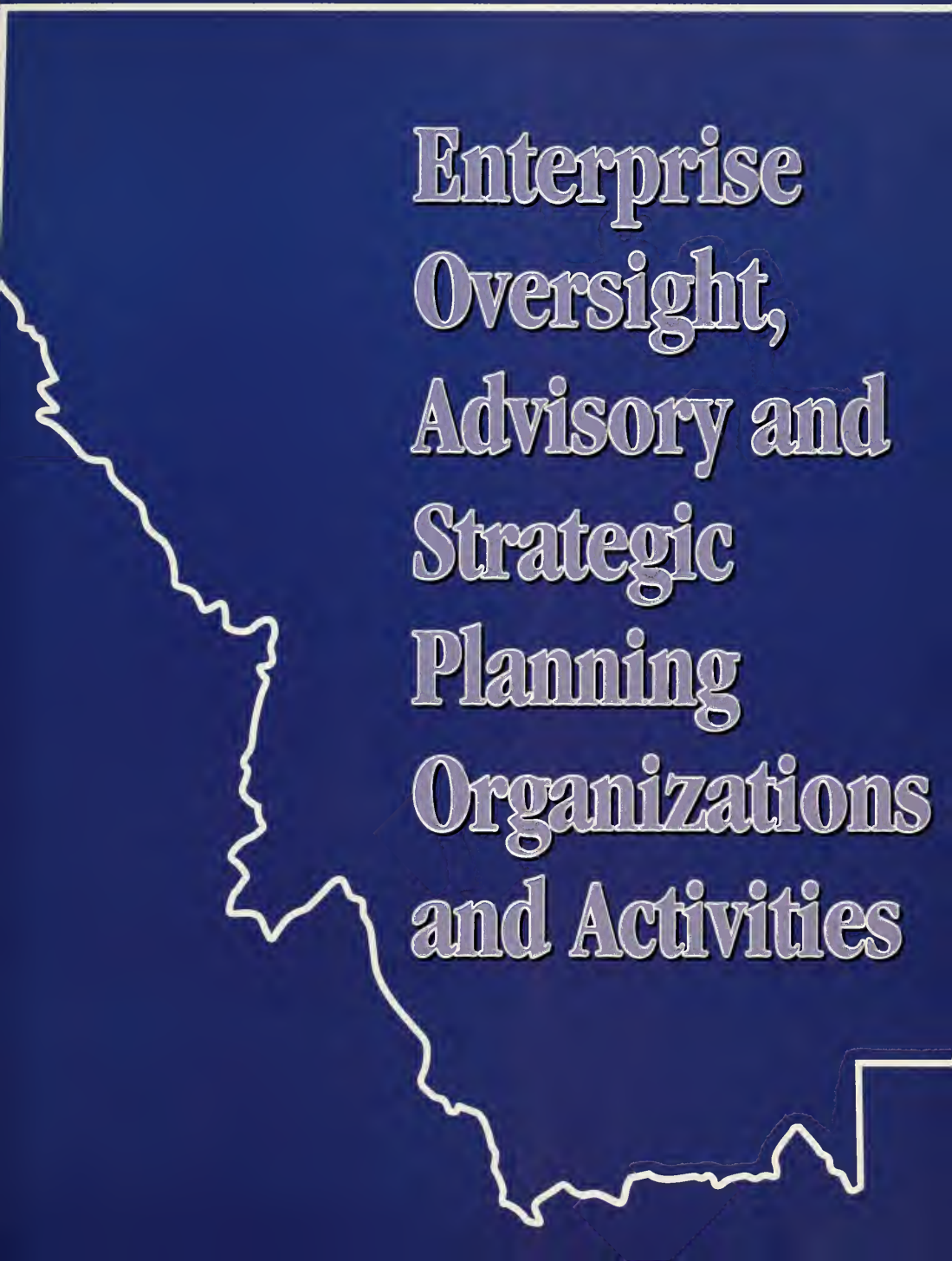


Figure 3

[1]GartnerGroup, September 1998, *1998 IT Spending and IT Staffing Survey*
http://www.gartnerweb.com

Enterprise Oversight, Advisory and Strategic Planning Organizations and Activities



Enterprise Oversight, Advisory and Strategic Planning Organizations and Activities

Over the course of the biennium, leaders in the State have been working diligently through various organizations to direct the State's IT efforts. These organizations performed strategic planning and directed agency activities relating to a wide variety of IT issues. The reader will find in the following pages, information pertaining to the committees and subcommittees and their results.

Joint Legislative Oversight Committee on State Management Systems

http://www.state.mt.us/leg/branch/mgt_main.htm

House Bill (HB) 89 is the enabling legislation for the Joint Oversight Committee on State Management Systems. It contains two requirements:

1. The Committee must exercise legislative oversight of information technology and state management systems, including review of proposed budgets, legislation, and major information technology contracts.
2. The Committee must actively involve local governments and encourage communication between local governments and state agencies with respect to information technology and the management of state assets.

HB 89 also provides the Committee with the following options:

1. The Committee may study laws governing state personnel, finance, and asset management to ensure clear, consistent language and maintenance of strict accountability for state and non-state assets entrusted to the State. Statutes governing personnel, finance, and asset management involve more than 12 titles and numerous sections of the Montana Code Annotated (MCA). Areas of code that the Committee may address include, but are not necessarily limited to, Titles 2, 17, 18, 19, 22, 23, 39, 49, 77, 85 and 87. Essentially any portion of Montana code that deals with state resources (property, money, personnel, wildlife, parks) is open to review by the Committee on State Management Systems.
2. The Committee may also study opportunities for implementing an information management plan that integrates the state's legacy software systems. Legacy systems are those that handle Montana's accounting, revenue estimating, personnel information, property procurement and other business functions. This integration project, now known as the Montana Project to Reengineer the Revenue and Information Management Environment (MT PRRIME), began in March 1996 and is well underway.
3. The Committee is also authorized to review administrative rules involving information technology to ensure compliance with the provisions of 2-17-501 through 2-17-503, MCA. These three sections of Montana code specify the data processing responsibilities and information technology security duties of the Department of Administration Director and establish the Information Technology Advisory Council (ITAC).

4. If a department proposes an administrative rule related to information technology, the Committee may contract for an economic impact statement or require the department proposing an administrative rule prepare an economic impact statement to measure the fiscal ramifications of the proposed rule. This action by the Committee requires the affirmative vote of at least five members.
5. Finally, HB 89 permits the Committee to investigate and report on any matter concerning information technology or state management systems.

MEMBERS

- Senator Mack Cole, Presiding Officer
- Representative Deb Kottel, Vice Presiding Officer
- Senator Sue Bartlett
- Senator Greg Jergeson
- Senator Mike Taylor
- Representative Chris Ahner
- Representative Tim Dowell
- Representative William Rehbein

1998-1999 BIENNIUM ACTIVITIES

Following is a list of issues and presentations that were brought before the Committee throughout the interim:

- Public Safety Communications
- Montana Cadastral Database Project
- Project META
- MT PRRIME
- ISD Rate Adjustment Items
- Electronic Transactions Act
- Year 2000
- IT Staff Salary Adjustments
- Local Government Involvement
- Legislator Use of Computers During Session
- University System/MT PRRIME
- Information Technology Advisory Council (ITAC)
- Desktop Software Standards
- Department of Corrections IT Projects
- IT Contracts

The Committee's final report can be found at
http://www.state.mt.us/leg/branch/mgt_fin.htm.

SUBCOMMITTEES

None

Information Technology Advisory Council (ITAC)

http://www.state.mt.us/isd/groups/itac

The Information Technology Advisory Council (ITAC) is statutorily created by 2-17-502, MCA. ITAC is an advisory council to the Department of Administration.

MEMBERS

ITAC is organized with six standing members and five tier members. The tier members represent their own agency as well as other agencies of similar size. The members of ITAC for the 1998-1999 biennium were:

- Lois Menzies, Chair, Department of Administration
- Pat Chenovick, Office of the Supreme Court Administrator
- Bob Person, Legislative Services Division
- Scott Buswell, Office of Public Instruction
- Joyce Scott, Office of the Commissioner of Higher Education
- Peggy Beltrone, Cascade County Commissioner, Local Government Representative
- Mick Robinson, Governor's Office, Tier One Representative
- Doug Booker, Department of Military Affairs, Tier Two Representative
- Peter Blouke, Department of Commerce, Tier Three Representative
- Mary Bryson, Department of Revenue, Tier Four Representative
- Laurie Ekanger, Department of Public Health and Human Services, Tier Five Representative

1998-1999 BIENNIUM ACTIVITIES

- Adopted Resolution – "Statement of Direction on Compliance with Section 508 of the Rehabilitation Act". The following statement of compliance was adopted: "It is the intent of the State of Montana to ensure that individuals with disabilities have comparable access to electronic information and data. The State will acquire and provide electronic information technology that can be readily accessed by individuals who have disabilities. It is the goal of the State to provide users with disabilities and users without disabilities equivalent access to work-related and State-provided public information resources."
- Software Suite – Endorsed the selection of a desktop software suite as the strategic direction for the State.
- Strategic Planning Session – ITAC along with additional agency and university representatives met in December 1997, to continue strategic planning for the enterprise. After considerable discussion, participants adopted the following definition of the enterprise as it relates to information technology:

  "The enterprise is all agencies of the State, including the University System, and participating local government and educational entities, working collaboratively to use, share, and leverage, to the greatest extent possible, the investments made in information technology (IT). To this end, agencies of the State, and

participating entities, share systems and networks, use standard software and hardware and train employees in common techniques."

During the Strategic Planning Session seven main issues were identified and assigned as follows:

1. Resources – ITAC Subcommittee Formed
2. Flexibility and Adaptability to Change – ITAC Subcommittee Formed
3. Support and Training – ITMC Recruitment and Retention Subcommittee, ITMC Training Subcommittee and the IT Focus Group
4. Governance – ITAC Subcommittee Formed
5. Public Access
6. Infrastructure – SummitNet Executive Council
7. Measuring Success – ISD Policy, Development and Customer Relations Bureau

The actions taken on each issue can be found in the ITAC Subcommittee Section.

- Internet Services Policy – Adopted the ITAC Internet Policy Advisory Task Force's draft policy with minor modifications. The policy can be found on the Internet at **http://www.state.mt.us/isd/policies/Enterprs/int010.htm.**
- LAN Backup and Archiving Plan Policy – Adopted the LAN Backup and Archiving Plan policy with changes to the "archiving" wording. The policy can be found on the Internet at **http://www.state.mt.us/isd/policies/Enterprs/Net010.htm.**
- ISD Budget – Provided feedback on the 2000-2001 budget for ISD.
- Recruitment and Retention – The following recommendations were made by the ITMC Recruitment and Retention Subcommittee in a report submitted to Lois Menzies, Director, Department of Administration.

  1. Retain Pay Exception for IT Positions. The pay exception issued in September 1997 to address retention problems for existing employees should remain in effect.

  2. Implement Immediate Grade Level Adjustments. IT employees could be granted a salary increase equivalent to an increase in one pay grade. The increase would be based on the existing pay plan. The increase would apply to all grades that contain IT professionals, supervisors and managers. For example, an employee in a position classified at a grade 12 with a "current market ratio" of .95 could be granted a salary increase equivalent to a grade 13 with a market ratio of .95.

  3. Develop and Implement a Market Based IT Broadbanded Pay Plan. Begin to develop and implement a market based IT pay plan based on broadbanding. A broadbanding IT pay system should be researched, developed and implemented based on efforts currently underway in the State Personnel Division.

  4. Study Additional Strategies for Recruiting and Retaining IT Professionals. Study and propose additional improvements in the state's employment package in the areas of recruitment, benefits, work environment, career development and recognition. Some employment "incentives", such as those related to the work environment and employee recognition, can be developed and implemented by

individual agencies. Others, however, will require extensive study, review and approval by the State Personnel Division and others before adoption. ITMC should continue to provide assistance to the appropriate advisory groups and agencies in identifying effective and competitive long-term changes to the state employment package.

Action: Recommendations 1, 3 and 4 were adopted as presented. Recommendation 2 was modified and as a result, in June 1998, Lois Menzies, Director, Department of Administration, approved a new pay plan exception for discretionary agency implementation for up to 40% of IT personnel per year.

- Desktop Database Recommendations – The following recommendations were made by the ITMC Desktop Database Subcommittee:

  1. Microsoft Access become a state standard desktop database.
  2. Microsoft Visual Basic become a state standard programming language.
  3. Lotus Approach remain a state standard desktop database.

  Action: All of the ITMC Desktop Database Recommendations were adopted.

- ITAC Resources Subcommittee Recommendations – All of the ITAC Resources Subcommittee's recommendations were adopted. For details on the recommendations please refer to the ITAC Subcommittee Section.

- ITAC Flexibility and Adaptability to Change Subcommittee Recommendations – All of the ITAC Flexibility and Adaptability to Change Subcommittee's recommendations were adopted. For details on the recommendations please refer to the ITAC Subcommittees section.

- ITMC Training Subcommittee Recommendations – All of the Training Subcommittee's recommendations were adopted. For details on the recommendations please refer to the ITMC Subcommittees section.

- ITAC Governance Subcommittee Recommendations – All of the ITAC Governance Subcommittee's recommendations were adopted. For details on the recommendations please refer to the ITAC Subcommittees section.

- Electronic Commerce Legislation – The general direction of the Electronic Commerce Legislation was approved.

SUBCOMMITTEES

ITAC Internet Policy Advisory Task Force

This task force was originally created in 1996 to make recommendations to ITAC regarding Internet policy. The task force was revived in August 1997.

MEMBERS

- Scott Buswell, Chair, Office of Public Instruction
- Audrey Hinman, ISD, Department of Administration
- Lynne Pizzini, ISD, Department of Administration
- Joel Oelfke, Public Service Commission
- Rusty Harper, Office of the State Auditor
- Sandra Kuchenbrod, Department of Agriculture
- Gary Wulf, Department of Commerce
- Mike Randall, Department of Transportation
- Judy Hanson, Department of Environmental Quality
- Dan Hawkins, Department of Justice
- Bob Person, Legislative Services Division
- Mike Billings, Department of Public Health and Human Services
- Ed Benasky, State Fund
- Karen Strege, State Library
- Mick Robinson, Governor's Office
- Stuart Knapp, Office of the Commissioner of Higher Education
- Ken McElroy, Department of Labor and Industry
- Milo Vukelich, Department of Revenue
- Karlee Smith, Department of Fish, Wildlife & Parks

ACTIONS

The task force submitted a policy to ITAC in January 1997. ITAC endorsed the policy with a few minor wording changes. Lois Menzies, Director, Department of Administration, signed the policy into effect in January 1998. The Internet Services policy can be found at **http://www.state.mt.us/isd/policies/Enterprs/int010.htm.**

ITAC Resources Subcommittee

ITAC created this Subcommittee to examine and make recommendations on the Resources issue identified at the Strategic Planning Session in December 1997.

MEMBERS

- Randy Mosley, Chair, Department of Natural Resources and Conservation
- Doug Booker, Department of Military Affairs
- Pat Chenovick, Office of the Supreme Court Administrator
- Bill Salisbury, Department of Transportation
- Joel Oelfke, Public Service Commission
- David Scott, Department of Labor and Industry
- Audrey Hinman, Staff, ISD, Department of Administration

ACTIONS

The ITAC Resources Subcommittee began its work by reviewing the eight questions developed at the Strategic Planning Session. Four major resource areas were identified for further review: Personnel staff/skills, Hardware/Software programming; Money, and Information Sharing. The Subcommittee went through a brainstorming and issue identification exercise for each of these resource areas. The list of issues was reviewed and prioritized and the top issues were selected for further examination. The Subcommittee researched the top issues and discussed possible solutions.

The following issues and recommendations were made to ITAC for consideration to address resource issues.

- **Issue 1 –** How can state agencies pool and share IT resources to better use available FTE and funding? Creating a special focus for integration and consolidation of multi-agency IT services in distributed locations. Agency or Program sharing of distributed IT Resources.

  Recommendation: The ITAC Resources Subcommittee supports the pilot project for Agency Sharing of Distributed IT Resources and recommends ITAC encourage ISD to design and implement such a project as a priority in FY 99.

- **Issue 2 –** How do we ensure equitable distribution of available resources to establish a base threshold? Do we need to change the existing surplus property mandates to better facilitate interagency exchange of IT resources, particularly older personal computers?

  Recommendation: The ITAC Resources Subcommittee supports the current efforts of the Surplus Property Bureau (SPB) in improving the availability of equipment to state agencies and working to eliminate many of the problems agency personnel have regarding the surplus of computer equipment. We recommend ITAC encourage SPB to continue efforts to streamline the process for transferring equipment between agencies.

- **Issue 3 –** Should a central database be developed to share information on surplus hardware and software with all agencies?

  Recommendation: ITAC Resources Subcommittee recommends that ITAC encourage SPB to develop a web page on their web site that agencies can use to list items of computer equipment that are surplus to their needs.

- **Issue 4 –** Should ISD establish a tiered data network rate to recover costs from data network users?

  Recommendation: ITAC Resources Subcommittee recommends ITAC continue to encourage ISD to develop a tiered data network rate structure which is based on usage, capacity, time, and/or distance basis.

The four recommendations of the ITAC Resources Subcommittee were all adopted.

ITAC Flexibility and Adaptability to Change Subcommittee

ITAC created this Subcommittee to examine and make recommendations on the Flexibility and Adaptability to Change issue identified at the Strategic Planning Session in December 1997.

MEMBERS

- Mary Bryson, Chair, Department of Revenue
- Scott Buswell, Office of Public Instruction
- Stuart Knapp, Office of the Commissioner of Higher Education
- Laurie Ekanger, Department of Public Health and Human Services
- Eivind Nilsen, State Fund
- Rusty Harper, Office of the State Auditor
- Audrey Hinman, Staff, ISD, Department of Administration

ACTIONS

The ITAC Flexibility and Adaptability to Change Subcommittee was tasked to identify how ITAC could become more flexible and adaptable to change. In the process the Subcommittee would identify the causes and symptoms that could impair ITAC's ability to react more positively to change. The Subcommittee limited its work to the nine questions identified during the Strategic Planning Session. The Subcommittee also determined to address the questions from the perspective of the enterprise or the impact on ITAC. The Subcommittee determined it would not address these questions on an agency basis, but recognizes that some of its recommendations may affect agency decision making and the impact of change within an agency.

From discussions and investigation into those nine questions, the Subcommittee identified four strategies with subsequent recommendations to ITAC.

- **Strategy 1: Adopt Guiding Principles –** In the Subcommittee discussions about how to make more informed decisions, the Subcommittee determined that some issues brought before ITAC could be resolved more quickly if ITAC referred back to some guiding principles which establish a framework for decision making. Establishing guiding principles would allow ITAC to respond/address change more quickly. Guiding principles allow ITAC to articulate in broad terms, the information technology direction for the enterprise. Such principles would provide ITAC guidance and direction when presented with policy, budget, or other issues, which require ITAC response. The guiding principles contained in the recommendation provide a basis for developing further principles to assist ITAC in becoming more flexible and adaptable. These principles represent many basic principles which ITAC has operated under in the past and should reflect ITAC's basic desire to serve the enterprise.

  Recommendation: ITAC adopt the following guiding principles and apply guiding principles to the issue resolution and decision process. Further, the Subcommittee recommends ITAC continue to update and develop this list of guiding principles.

  1. Communicate and share data across agency lines (refer to the Data Sharing resolution passed by ITAC in 1995).
  2. Uniformity to pursue enterprise solutions to address Principle #1, but flexible enough to meet individual business needs (e.g. consider object oriented technology).
  3. Enable Montana (the enterprise) to fully participate in electronic commerce
  4. Public Access – Enterprise information should be accessible to all, but provide balance between the public's right to know and an individual's right to privacy.
  5. Measuring success – All systems should have a customer service focus and not an administrative focus. To measure success of a system you must ask the users of the system their satisfaction level.
  6. Resource use – Consider the best economic use of the state's resources, including sharing both FTE and technology across agency lines. Consider that it's not the most important to reach the lowest common denominator and sharing resources may enable that.
  7. Employees and managers should be adequately trained.
  8. Recognize information technology as an enabler or tool and not as the driver. Information technology should be inexpensive, yet provide better service to all using it. The enterprise should maximize its use at an affordable cost.

- **Strategy 2: Define What Issues/Decisions Are Brought to ITAC –** The Subcommittee spent many hours discussing the decision process associated with ITAC meetings, and the issues brought before ITAC for consideration. ITAC could be more flexible and adaptable to change if the issues brought to ITAC were more clearly defined and fit certain criteria. The Subcommittee believes ITAC members are asked to consider issues and be involved in decisions they should not be involved in. ITAC should review again its statutory purpose and its advisory capacity and define the type of issues it will consider.

In discussing the types of issues/decisions that ITAC has been involved in and the type of issues/decisions ITAC should be involved in caused the Subcommittee to consider several factors. The Subcommittee believes ITAC should only be involved in the decision making process when it has the ability to influence the decision (when the decision is not already made). ITAC should not be asked to consider issues or make decisions on issues that require a high level of technical knowledge (above the technical level of knowledge of the group).

Recommendation: ITAC use the following criteria to determine which issues are brought to ITAC for consideration. An issue would be brought to ITAC only if it met one of these four criteria. Further, the Subcommittee recommends ITAC do more work to develop and frame each of these criteria including creating the boundaries and providing some examples. This work should also include how ITMC and ISD are involved in the issue development and resolution process and when resolution should occur at their level.

1. The issue has broad budget impact that crosses agency lines
2. The issue has an enterprise-wide business impact
3. The issue involves statewide technology policy direction
4. The issue provides an overview of what is coming down the road (an industry trend)

- **Strategy 3: Encourage Adequate Information Technology Training –** ITAC could become more flexible and adaptable if members were adequately trained in information technology. Members are often asked to evaluate issues and make recommendations in areas where they do not have technical knowledge. It creates uneasiness among the group when they are put in a position of making what appear to be uninformed decisions. The issue of adequate training in information technology applies to the agency as well. As the Subcommittee discussed the issue, it became apparent that "just in time" training would not necessarily work when ITAC is expected to consider strategic initiatives. In addition, there are still managers in state government that are functionally computer illiterate and are afraid of information technology. The Subcommittee considered ways to address the issue of educating management in information technology.

  Recommendation: ITAC become a forum for training its members in information technology. By establishing ITAC as a forum for educating its members, the Subcommittee believes ITAC could adopt the following training objectives:

  1. Members can assess how information technology can be used to meet their business needs.
  2. Members can become more educated and make more informed decisions.
  3. Members can bridge the gap between functional and technical thinking. An example might be showing how a hand written analysis could be done in a spreadsheet.
  4. Members could be exposed to new innovations, industry trends and best practices.

This recommendation involves the following actions:

1. ITAC should invite experts to present issues or technology trends to ITAC. The presenters should have a futurist view of the information technology industry and the ability to present information to ITAC at its technical level.
2. ITAC should create an agenda at the beginning of the year to identify issues that will be facing ITAC during the year (this agenda could be created at the strategic planning session.) This would give members more time to investigate and learn about the topics coming their way.
3. ITAC should request the PDC to create, in conjunction with ISD, a "Managing and Using Technology" class in the management training series provided for supervisors. The focus of the class would be on "here is how to manage information technology." ITAC should strongly recommend that all agencies send appropriate personnel to the course.

- **Strategy 4: Encourage More Peer Sharing/Peer Review –** ITAC could become more flexible and adaptable to change if it were to provide a forum for sharing ideas and past experiences among peers. The Subcommittee, in discussing how an organization could achieve flexibility to respond to changes in technology, discussed how ITAC might provide insight to agencies faced with rapid changes in technology. The Subcommittee discussed several items. Ideas generated include:

  1. Ensuring top management supports the new technology and understands the business need addressed by the technology;
  2. Management should provide direction to the information technology staff, rather than the IT staff setting business direction;
  3. Peer sharing on large systems to generate discussion on experiences and technology to avoid pitfalls and redundancy within the enterprise; and
  4. Establishing procedures for peer reviews or peer sharing of ideas relating to large systems.

  Currently ITAC does always not take advantage of allowing members to learn from each other and it does not provide its members the opportunity to provide feedback. Although there has been some sharing within the enterprise, ITAC could encourage more by providing this forum. This can minimize the potential for duplicate efforts and allow agencies to consolidate some efforts when appropriate.

  Recommendation: ITAC become a forum for its members to share and review each other's projects, past experiences and ideas. The goal is to learn from each other and join efforts when possible.

The four recommendations of the ITAC Flexibility and Adaptability to Change Subcommittee were all adopted.

ITAC Governance Subcommittee

ITAC created this Subcommittee to examine and make recommendations on the Governance issue identified at the Strategic Planning Session in December 1997.

MEMBERS

- Lois Menzies, Chair, Department of Administration
- Mick Robinson, Governor's Office
- Peter Blouke, Department of Commerce
- Peggy Beltrone, Cascade County Commissioner
- Tony Herbert, ISD, Department of Administration
- Larry Fasbender, Department of Justice
- Jeff Brandt, Staff, ISD, Department of Administration

ACTIONS

The following recommendations were made to ITAC for consideration to address the Governance issue.

- **Recommendation 1:** ITAC should request that the Department of Administration assess the manner in which it provides staff support to ITAC and make changes as necessary. Three recommendations for the Department to consider are:

    1. Early Notification on Issues – The Department should provide notification to ITAC as soon as possible when substantive IT issues are encountered.
    2. Report Objectivity – The Department should develop an internal review process to ensure that reports and/or recommendations developed by staff present the information in an objective manner.
    3. Issue Closure – The Department should develop a mechanism to ensure that final disposition of issues that are addressed by ITAC are reported back to ITAC.

- **Recommendation 2:** ITAC should update its Executive Order. The Executive Order establishing ITAC should be updated to reflect the many changes that have occurred in the past few years with regard to the organization and operation of the Council.
- **Recommendation 3:** In June 1999, ITAC should review the manner in which it is organized to determine if it is satisfied with the changes that have been made to the organization, especially the decision to create a 11-member council that represents all agencies.

The three recommendations of the ITAC Governance Subcommittee were all adopted.

ITAC Electronic Commerce Subcommittee

ITAC created this Subcommittee to review electronic commerce and the direction the State should take in this area. ITAC requested the Subcommittee examine and make recommendations on all aspects of the electronic commerce issue they felt were important from an enterprise view.

MEMBERS

- Peter Blouke, Chair, Department of Commerce
- David Scott, Department of Labor and Industry
- Darrell Zook, Department of Transportation
- Mike Boyer, Department of Revenue
- Art Pembroke, Department of Justice
- Audrey Hinman, ISD, Department of Administration
- Angela Fultz-Nordstrom, Office of the Secretary of State
- Dan Whyte, Office of the Secretary of State
- Leanne Kurtz, Legislative Services Division
- Marv Eicholtz, Department of Administration
- Brian Dostal, ISD, Department of Administration
- John Berry, ISD, Department of Administration
- Lynne Pizzini, ISD, Department of Administration
- Paulette DeHart, Lewis and Clark County

ACTIONS

The Subcommittee researched and drafted legislation that the Office of the Secretary of State will present to the 1999 Legislature. The general direction of the Electronic Commerce Legislation was approved.

OTHER STRATEGIC PLANNING ISSUES

Support and Training – ITMC Recruitment and Retention Subcommittee, ITMC Training Subcommittee, and the IT Focus Group

ITAC divided the support and training issue into the following three sub issues:

1. How do we provide training to all levels of IT users?
   ITMC appointed the Training Subcommittee to work on this.
2. How do we attract and sustain qualified IT staff?
   The ITMC Recruitment and Retention Subcommittee worked on this issue along with the IT Focus Group.
3. How do we determine the appropriate approach to support services?
   ITMC appointed the Training Subcommittee to work on this.

- **Issue 1 – How do we provide training to all levels of IT users?**

  This issue was assigned to the ITMC Training Subcommittee. The ITMC Training Subcommittee made the following recommendations.

  1. ITMC recommends that the state continue to support the delivery of technical training to all levels of IT users.
  2. ITMC recommends that a training infrastructure be developed to take advantage of the technical expertise developed by agency technical staff, including ISD, as well as short technically informative sessions by outside experts.
  3. ITMC recommends that professional IT staff receive a minimum of five days of professional development or continuing education per year.
  4. ITMC recommends establishing a training clearinghouse via an intranet page to enable staff to share experiences, recommendations or critiques of training taken.
  5. ITMC recommends that the state research providing courses online.
  6. ITMC recommends that the State make more educational opportunities available in the following areas:

  - More project management
  - More systems analysis
  - More upper management briefings

  This list is nonexclusive; additional topics may be added by ITMC.

  7. ITMC recommends that a group be established to develop new training strategies and models for IT professionals that integrate with the new competency-based pay plan system.
  8. ITMC recommends that technical managers should provide subject matter expertise to assist SPD rewrite occupational specifications.

  The recommendations from the ITMC Training Subcommittee were all adopted by the ITMC Executive Board and ITAC.

- **Issue 2 – How do we attract and sustain qualified IT staff?**

  This issue was assigned to the ITMC Recruitment and Retention Subcommittee. The Subcommittee works is summarized below.

  Phase 1: Compensation Issues (Information Technology Pay Exception) – The consensus of the Subcommittee was that Montana has serious recruiting and retention problems with IT professionals. Given the state's increasing reliance on IT solutions the problem was perceived by the Subcommittee as critical, potentially endangering such initiatives as MT PRRIME, Year 2000, and the desktop software standards conversion, if not resolved. Solutions were explored on both a short and long-term basis, short-term being solutions which could be implemented under existing law and rules, long-term being solutions requiring either potential legislative action or significant inter-agency coordination. Solutions were also explored on a pay and non-pay basis.

The Subcommittee's report, *Recruitment and Retention of State Information Technology Professionals,* contained four recommendations:

1. Retain Pay Exception for IT Positions. The pay exception issued in September 1997 to address retention problems for existing employees should remain in effect.
2. Implement Immediate Grade Level Adjustments. IT employees could be granted a salary increase equivalent to an increase in one pay grade. The increase would be based on the existing pay plan. The increase would apply to all grades that contain IT professionals, supervisors and managers. For example, an employee in a position classified at a grade 12 with a "current market ratio" of .95 could be granted a salary increase equivalent to a grade 13 with a market ratio of .95.
3. Develop and Implement a Market Based IT Broadbanded Pay Plan. Begin to develop and implement a market based IT pay plan based on broadbanding. A broadbanding IT pay system should be researched, developed and implemented based on efforts currently underway in the State Personnel Division.
4. Study Additional Strategies for Recruiting and Retaining IT Professionals. Study and propose additional improvements in the state's employment package in the areas of recruitment, benefits, work environment, career development and recognition. Some employment "incentives", such as those related to the work environment and employee recognition, can be developed and implemented by individual agencies. Others, however, will require extensive study, review and approval by the State Personnel Division and others before adoption. ITMC should continue to provide assistance to the appropriate advisory groups and agencies in identifying effective and competitive long-term changes to the state employment package.

These recommendations were presented to, and approved by ITMC. ITAC adopted recommendations 1, 2 and 4 as presented. Recommendation 2 was modified and as a result, in June 1998, Lois Menzies, Director, Department of Administration, approved a new Pay Plan exception for discretionary agency implementation for up to 40% of IT personnel per year.

Phase 2: Non-Compensation Issues – The Phase 1 report, *Information Technology Recruitment and Retention Strategies,* listed strategies used by the private sector and government entities to improve the recruitment and retention of valued information technology professionals. It was the working document for the Subcommittee in Phase 2. The Subcommittee evaluated each item on the list in terms of whether it contravened existing policy or statutory mandate, or perhaps required new policy or enabling legislation. The items were regrouped into the following categories:

- Active – Strategies that are currently being researched by other committees or work groups.
- Awareness – Strategies that are already available for Agency use. There were some items in this group that surprised one or more members of the Subcommittee.

- Future Opportunities – Strategies that the Subcommittee felt held potential merit and are recommending be pursued. Policy and/or legislative issues are identified on the attachment for these items. The Subcommittee also identified the entities it felt were appropriate to continue to do work and develop these strategies into working models/pilot projects.
- Removed – Strategies the Subcommittee dropped due to a lack of interest, lack of definition, or simply felt were impractical to pursue.
- Complete – Strategies that were addressed in the ITMC Recruitment and Retention Subcommittee's pay exception recommendation.

Recommendations:

1. That ITMC endorse the continued effort of those items identified as Future Opportunities.
2. That ITAC indicate for each item listed under Future Opportunities whether or not further research is desired. If further research is desired, it is recommended ITAC make an official request of the group identified in the Entity column.

ITMC endorsed the Subcommittee's recommendations. ITAC prioritized the items found under Future Opportunities for future research.

- **Issue 3 –** How do we determine the appropriate approach to support services?

  This issue was assigned to the ITMC Training Subcommittee. The Training Subcommittee summarized past activity in this area:

  - *Outsourcing in the Public Sector*, 1993
    Studied advantages and disadvantages of outsourcing
    Studied outsourcing in other state governments
  - *IT Services Options Analysis and Recommendation*, 1996
    Studied options for IT services within state government (status quo, attached to agency, department with commission, department without commission)
    Studied option for IT as a quasi public agency
    Studied option for IT as public corporation
    Studied option for IT as private corporation
  - *Public Corporation Organizational Model for Providing IT Services*, 1996
    Governor requested a study of providing IT services through a public-private partnership corporation
    Compared ISD to the San Diego Data Processing Corporation
  - *ITAC Coordination Task Force Personal Services Report*, 1996
    Studied IT support services obtained from both IT classified and non-IT classified personnel
    Studied sharing of IT support services
    Studied impact of new technologies on support requirements
    Studied preferences on obtaining additional support services

- *Agency Sharing of Distributed IT Resources, 1998*
  Proposed EPP item for FY2000/01
  ITAC voted not to move this proposal forward
- ISD pilot of shared resources project, ITAC Resources Subcommittee
  Alternative to EPP proposal

Recommendation: ITMC has no recommendation and feels no need to take further action on this issue.

Public Access

A lot of work has been done in past years regarding this issue. Further work has been deferred at this time.

Infrastructure – SummitNet Executive Council

The ITAC Infrastructure Issue identified at the ITAC Strategic Planning Session was assigned to the SummitNet Executive Council (SEC) for their review and feedback. In December 1997, SEC had requested that a Telecommunications Strategic Planning Project be undertaken. ISD contracted with the consulting firm Federal Engineering, Inc. to develop a comprehensive telecommunications plan. Final recommendations were not available at the deadline for publishing this report. Final recommendations will be made available on ISD's web site in January 1999. For more information, see Telecommunications Network Planning on page 12.

Measuring Success – ISD Policy, Development and Customer Relations Bureau

ISD is developing an internal survey for state IT managers, program managers, and end users to measure the success of deploying IT services throughout state government. The survey's goal is to measure how these groups of state personnel feel about central and agency services.

For this issue, ISD also had research conducted through the University of Montana, Bureau of Business and Economic Research, of the public and how they view our services. A poll was completed with questions centering on citizen participation in technology.

Poll results indicate that Montanans are supportive of State government using technology to deliver services. Seventy-three percent (73%) of respondents agreed or strongly agreed that new and emerging technology should be used; 53% agreed or strongly agreed that government should invest heavily in technology to deliver services.

SummitNet Executive Council (SEC)

http://www.state.mt.us/isd/groups/sec

The SummitNet Executive Council (SEC) was created by Governor Racicot in 1995 by Executive Order.

The Order included the following criteria:

- The Council shall provide a governance structure of shared authority within the existing statutory framework regarding management of telecommunication networks.
- The Council shall exercise broad authority for strategic decision making with regard to SummitNet (the State network). This authority shall include:
  - Policy development
  - Participation (identification of entities allowed to use SummitNet)
  - Financial planning
  - Strategic planning
  - Cost recovery planning and policies
  - Appropriate use policies
  - Development and evaluation of new networking technologies, and
  - Other policy issues related to SummitNet as determined by the Council.
- The membership shall consist of the following: The Director of the Department of Administration, who will chair the council; The Commissioner of Higher Education (or designee); the Superintendent of Public Instruction (or designee); a representative from local government who shall be appointed by the Governor; and three Information Technology Advisory Council (ITAC) members who represent state agencies and who shall be appointed by the Governor.

MEMBERS

- Lois Menzies, Chair, Department of Administration
- Dr. Richard Crofts, Commissioner of Higher Education
- Scott Buswell, Office of Public Instruction
- Mary Bryson, Department of Revenue
- Bob Person, Legislative Services Division
- Bill Salisbury, Department of Transportation
- Janet Kelly, Custer County Commissioner

1998-1999 BIENNIUM ACTIVITIES

- SummitNet Visioning Conference. For more information, see page 12.
- Endorsed the hiring of Federal Engineering, Inc.

SUBCOMMITTEES

SummitNet Executive Council Industry Subcommittee

This Subcommittee was formed in response to the visioning conference held by SEC in November 1997. The purpose of the Subcommittee is to explore and make recommendations to SEC on the following issues:

1. Ways to promote better collaboration and build stronger working relationships between the telecommunications industry and the SummitNet stakeholders
2. The extent of services SummitNet will provide
3. Standard setting endeavors that involve both public and private stakeholders and ways to accomplish a common direction both in public and private industry
4. The state's role in providing services to those entities not normally served by SummitNet, such as but not limited to: non-profit organizations and entities for which there is no viable means to acquire telecommunications services; and
5. Ways SummitNet could enhance opportunities for economic development in the State of Montana.

MEMBERS

- Lois Menzies, Chair, Department of Administration
- Dr. Richard Crofts, Commissioner of Higher Education
- Scott Buswell, Office of Public Instruction
- Peter Blouke, Department of Commerce
- Tony Herbert, ISD, Department of Administration
- Geoff Feiss, Montana Telephone Association
- Gina Konen, Touch America, Inc.
- Dennis Lester, US WEST Communications, Inc.
- Richard Rhodes, Western Tele-Communications, Inc.
- Mike Strand, Montana Independent Telecommunications, Inc.

ACTIONS

The Subcommittee worked with ISD during the development of the Statewide Telecommunications Plan and acted as a liaison between the Federal Engineering consultant and private industry.

The Subcommittee's work is still in progress.

SummitNet Executive Council Technical Advisory Group

This Subcommittee's purpose is to discuss technical issues as they relate to SummitNet.

MEMBERS

- Ron Heilman, Chair, ISD, Department of Administration
- Eric Lindeen, Montana State University
- Paul Marsh, University of Montana
- Karen Nelson, Department of Justice

ACTIONS

- Monitor and manage the use of the SummitNet core backbone
- Consolidation of state agency and University System Internet access traffic
- Design and implementation of the SummitNet core backbone

Montana Geographic Information Council (MGIC)

http://www.state.mt.us/isd/groups/mgic

In 1997, Governor Marc Racicot recognized the impact that Geographic Information System (GIS) technology and spatial data in general has on many state agencies, as well as local, federal and private interests within the State. By Executive Order, he created the Montana Geographic Information Council (MGIC) to provide policy level direction and promote efficient and effective use of resources for matters related to geographic information. The Council is comprised of representatives from four state and three federal agencies, three local governments, two private sector businesses, and one tribal delegate. MGIC relies on the technical expertise of preexisting GIS groups like the Montana Interagency Technical Working Group (TWG) and the Montana Local Government GIS Coalition (MLGGC) to provide the technical data needed to create policy.

The Council's stated objectives within the Executive Order are as follows:

1. Promote a spirit of cooperation among state, federal and local agencies, and the private sector in addressing geographic data and information needs and services in Montana.
2. Review and establish priorities for statewide geographic information needs and assist in the development of implementation plans.
3. Simplify cost sharing and collaborative arrangements to develop and maintain high-priority GIS databases and applications programs.
4. Promote coordination of programs, policies, technologies and resources to maximize opportunities and reduce duplication of effort, and to facilitate the documentation, distribution and exchange of geographic information.
5. Ensure the development of consistent policies, standards and guidelines for geographic information.
6. Complement and enhance ongoing coordination efforts of TWG and MLGGC.
7. Provide recommendations to the Governor and the legislature, when appropriate, concerning issues related to geographic information in Montana.

MEMBERS

- Lois Menzies, Chair, Department of Administration
- Richard Aspinall, Geographic Information and Analysis Center, Montana State University
- Harold Blattie, Stillwater County
- Stuart Blundell, Integrated GeoScience
- Mary Bryson, Department of Revenue
- Lance Clampitt, USGS National Mapping Division
- Steve Fourstar, Bureau of Indian Affairs

- Steve Hellenthal, Yellowstone County
- Dan Mates, Bureau of Land Management
- Jon Sesso, Butte-Silver Bow Planning Department
- Karen Strege, Montana State Library
- Dan Sullivan, Montana Power Company

1998-1999 BIENNIUM ACTIVITIES

- Received regular updates from all Subcommittees
- Received regular updates from MLGGC and TWG
- Adopted seven recommendations from the Land Record Modernization Subcommittee for defining the Montana Cadastral Database Project
- Adopted Montana Cadastral Database Project Work Plan
- For more information see **http://www.state.mt.us/isd/groups/mgic**

SUBCOMMITTEES

Land Record Modernization Group

This group is primarily responsible for oversight of the Montana Cadastral Database Project and cadastral mapping and standards in general.

MEMBERS

- Steve Hellenthal, Chair, Yellowstone County
- Craig Bacino, Staff, ISD, Department of Administration
- Dan Sullivan, Montana Power Company
- Dan Mates, Bureau of Land Management
- Harold Blattie, Stillwater County
- Jon Sesso, Butte-Silver Bow Planning Department
- Mary Bryson, Department of Revenue
- Sue Haverfield, MLGGC Liaison
- Lydia Bailey, TWG Liaison

ACTIONS

- Determine policy for the Montana Cadastral Database Project
- Developing a custodianship/maintenance data model for cadastral data in Montana
- For more information see **http://www.state.mt.us/isd/groups/mgic/landrec.htm**

Coordination and Infrastructure Group

This group promotes interaction and coordination between GIS practitioners at all levels of government and the private sector.

MEMBERS

- Karen Strege, Chair, State Library
- Stu Kirkpatrick, Staff, ISD, Department of Administration
- Dan Mates, Bureau of Land Management
- Richard Aspinall, Geographic Information and Analysis Center, Montana State University
- Lance Clampitt, USGS National Mapping Division
- Lois Menzies, Department of Administration
- Gretchen Burton, MLGGC Liaison
- Mike Sweet, TWG Liaison

ACTIONS

- Developed the Issue Oriented model for submitting GIS proposals to MGIC
- Develops and improves the MGIC business model
- Helps determine roles for technical and policy groups that provide effective GIS communication
- For more information see **http://www.state.mt.us/isd/groups/mgic/infra.htm**

Legal and Legislative Group

This group examines GIS related issues that may require state funding or legislation.

MEMBERS

- Don Childress, Chair, Wildlife Division, Department of Fish, Wildlife & Parks
- Jeff Brandt, Staff, ISD, Department of Administration
- Karen Strege, State Library
- Harold Blattie, Stillwater County
- Jon Sesso, Butte-Silver Bow Planning Department
- Steve Hellenthal, Yellowstone County
- Mary Bryson, Department of Revenue
- Lois Menzies, Department of Administration
- Doug Burreson, MLGGC Liaison

ACTIONS

- Investigating and preparing policy on sale of GIS data
- Investigating and preparing policy on cost recovery for electronic transmittal of specially requested spatial data
- Research funding sources for MGIC approved GIS projects or issues
- For more information see **http://www.state.mt.us/isd/groups/mgic/legal.htm**

Cost Benefit and Economic Analysis Group

To promote efficient and effective GIS implementation and spatial data collection in Montana.

MEMBERS

- Richard Aspinall, Chair, Geographic Information and Analysis Center, Montana State University
- Stu Kirkpatrick, Staff, ISD, Department of Administration
- Dan Sullivan, Montana Power Company
- Stuart Blundell, Integrated GeoScience
- Harold Blattie, Stillwater County
- Don Childress, Wildlife Division, Department of Fish, Wildlife & Parks
- Karen Hruska, MLGGC Liaison
- Mike Sweet, TWG Liaison

ACTIONS

- This group produced a report entitled *Draft Interim Analysis of GIS Implementations in Montana State and Counties Governments.* This group will be responsible for recommending policy decisions based on that report.
- For more information see **http://www.state.mt.us/isd/groups/mgic/econom.htm**

Technology Group

To examine technical standards, practices, and other issues that effect the GIS community.

MEMBERS

- Richard Aspinall, Chair, Geographic Information and Analysis Center, Montana State University
- Stu Kirkpatrick, Staff, ISD, Department of Administration
- Lance Clampitt, USGS National Mapping Division
- Steve Hellenthal, Yellowstone County
- Steve Fourstar, Bureau of Indian Affairs
- Rick Breckenridge, MLGGC Liaison
- Hans Zuring, TWG Liaison

ACTIONS

- This group has reviewed vendor specific GIS software standards (recommending against them) and GIS software term contracts (recommending for them)
- For more information see **http://www.state.mt.us/isd/groups/mgic/techno.htm**

Montana Public Safety Communications Council (MPSCC)

http://www.state.mt.us/isd/groups/Safe

The Montana Public Safety Communications Council was created by Executive Order in November 1997 by Governor Marc Racicot to address the pressing need for public safety communications.

MEMBERS

- Lois Menzies, Chair, Department of Administration
- Mike Meldahl, Montana Power Company
- Dennis Taylor, City of Helena
- Mike Griffith, Lewis & Clark County
- William S. Strizich, U.S. Marshall
- John Blacker, Department of Transportation
- Larry Fasbender, Department of Justice
- Bob Jones, Great Falls Police Department
- Bill Slaughter, Gallatin County
- Drew Dawson, Department of Public Health and Human Services
- William Jameson, Montana State University
- Scott Waldron, Montana Fire Chiefs Association
- Anita Parkin, Mineral County Sheriff's Department
- Lloyd Jackson, Flathead Nation

1998-1999 BIENNIUM ACTIVITIES

- Selected project design standard
- Preliminary financial plan accepted
- Preliminary system design approved

SUBCOMMITTEES

Technical Subcommittee

The Technical Subcommittee assists and directs the design consultant.

MEMBERS

- Willaim Jameson, Chair, Montana State University
- Jerry Dupler, Department of Transportation
- Anita Parkin, Mineral County Sheriff's Department
- Randy Martinez, U.S. Marshall Service
- Robert DeLange, Department of Natural Resources and Conservation
- Clark Walters, Montana Power Company
- Charlie Larsen, Montana Highway Patrol

ACTIONS

Recommended to the Council the project standard and coverage reliability criterion.

Governance/Finance Subcommittee

This Subcommittee formulates the administrative structure of the project as well as prepares material for the upcoming Legislature.

MEMBERS

- Lois Menzies, Chair, Department of Administration
- Tony Herbert, ISD, Department of Administration
- Larry Fasbender, Department of Justice
- Mike Meldahl, Montana Power Company
- John Blacker, Department of Transportation
- Dennis Taylor, City of Helena
- Drew Dawson, Department of Public Health and Human Services
- Mike Griffith, Lewis & Clark County

ACTIONS

Recommended to the Council the governance structure and the financial mechanisms required for system operation.

9-1-1 Advisory Council

http://www.state.mt.us/isd/groups/9-1-1

The 9-1-1 Advisory Council is statutorily created by 10-4-102, MCA to participate in the development and implementation of emergency telephone systems using 9-1-1 in Montana. The Council may also review the status of existing 9-1-1 systems in Montana, discuss current issues impacting 9-1-1 service, and make recommendations for the future development of the state's emergency telephone systems.

MEMBERS

- Drew Dawson, Chair, Emergency Medical Services Bureau, Department of Public Health & Human Services
- William McCauley, Montana League of Cities and Towns
- Jane Jelinski, Montana Association of Counties
- Rick Newby, Montana Association of Chiefs of Police
- Kurt Seward, Montana Sheriffs and Peace Officers Association
- Jim Thomas, Association of Public Safety Communications Officials-International
- Richard Brumley, Montana Emergency Medical Services Association
- Marshall Kyle, Montana Fire Chiefs Association
- Jim Kraft, Association of Disaster and Emergency Services Coordinators
- Al Brockway, Montana Board of Crime Control
- Major Bert Obert, Montana Highway Patrol
- James Anderson, Department of Military Affairs, Disaster and Emergency Services
- Michael Strand, Montana Independent Telecommunications Systems
- Geoffrey Feiss, Montana Telephone Association
- Dan Green, US West Communications
- Ted Benson, Western Wireless
- Don Hollister, Century Communications

1998-1999 BIENNIUM ACTIVITIES

The Council assisted in developing the Enhanced 9-1-1 Telephone System Application, the *Enhanced 9-1-1 Coordinator's Handbook*, and the *Montana Addressing Guidebook for Local Governments* which have been distributed to Montana city and county governments and 9-1-1 jurisdictions to provide guidelines for enhanced 9-1-1 planning. The Council also voted to support legislation for mandatory certification for Montana dispatchers.

SUBCOMMITTEES

Wireless Enhanced 9-1-1 Subcommittee

The purpose of this Subcommittee is to look at wireless E9-1-1 issues and develop a manual with generic recommendations for wireless E9-1-1 implementation at the local government level.

MEMBERS

- Ted Benson, Western Wireless
- Geoffrey Feiss, Montana Telephone Association
- Don Hollister, Century Communications
- Jim Thomas, Association of Public-safety Communications Officials-International
- Dan Green, US West Communications

ACTIONS

The Subcommittee's work is still in progress.

Information Technology Managers Council (ITMC)

http://www.state.mt.us/isd/groups/Itmc

The Information Technology Managers Council (ITMC) was revitalized and reorganized as a result of a two-day workshop and strategic planning session in September 1997.

The group, which has existed in one form or another since the mid 70s is now an advisory council to the Department of Administration formally established by an Agency Order signed by the Director of the Department of Administration.

Its purpose is to "represent, communicate and champion agency and enterprise needs and to advise the Department of Administration on technical issues concerning information technology in State government."

ITMC also provides a forum for information technology managers. The Council serves to improve the management of the State of Montana's data and information technology resources through discussion of issues, analysis of opportunities, sharing of ideas and recommending improvements.

MEMBERS

Membership consists of an information technology manager or system coordinator from interested agencies, offices of elected officials, universities, and local government. The Administrator of the Information Services Division of the Department of Administration is also a member. Members are appointed by, and serve at the pleasure of, the Director of the Department of Administration for two-year terms.

The members of ITMC as of October 1998 were:

- Tony Herbert, ISD, Department of Administration
- Hank Voderberg, Department of Administration
- Alan Wintersteen, Department of Agriculture
- Bob Meismer, Office of the State Auditor
- Gary Wulf, Department of Commerce
- Larry DeFrance, Department of Corrections
- Tripp Hammer, Department of Environmental Quality
- Barney Benkelman, Department of Fish, Wildlife & Parks
- Steve Colberg, Office of the Governor
- To Be Announced, Office of the Commissioner of Higher Education
- Dawn Brewer, Historical Society
- Dana Corson, Judicial Branch
- Art Pembroke, Department of Justice
- David Nagel, Department of Labor and Industry
- Tori Hunthausen, Legislative Audit Division
- Terry Johnson, Legislative Fiscal Division
- Hank Trenk, Legislative Services Division, Chair – Fiscal Year 1999
- Karen Hruska, Lewis & Clark County

- To Be Announced, State Library
- Kipp Riebe, Department of Commerce, Lottery Division
- Kathy James, Department of Livestock
- Homer Young, Department of Military Affairs
- Carleen Layne, Montana Arts Council
- Bob Auer, Department of Natural Resources & Conservation
- Dulcy Hubbert, Commissioner of Political Practices
- Dan Forbes, Department of Public Health & Human Services
- Bob Morris, Office of Public Instruction
- Joel Oelfke, Public Service Commission
- Mike Boyer, Department of Revenue
- Gregg Wheeler, Office of the Secretary of State
- Connie Brooks, State Fund
- Michael Randall, Department of Transportation, Chair – Fiscal Year 1998
- Ken Stolz, University of Montana
- To Be Announced, Montana State University

1998-1999 BIENNIUM ACTIVITIES

- Held Strategic Planning Session in September 1997
- Operating procedures were adopted
- Agency Order was signed by Lois Menzies, Director, Department of Administration
- Election of Executive Board Members
- Printer Term Contract – The decision was made to rebid the Printer Term Contract to include multiple vendors. It was clarified that the new term contract should only include laser printers
- Desktop Database Recommendations – The Desktop Database Subcommittee recommendations were adopted
- Recruitment and Retention Recommendations – The ITMC Recruitment and Retention Subcommittee recommendations were adopted
- Training Subcommittee Recommendations – The Executive Board approved the Training Subcommittee recommendations for consideration by ITAC
- Ongoing Updates – Year 2000, MT PRRIME, Computing Policy, Electronic Mail Project, Information Technology Advisory Council (ITAC) activities, Executive Board Decisions

SUBCOMMITTEES

ITMC Recruitment and Retention Subcommittee Phase I

This Subcommittee was established to deal with the difficult problem of recruiting and retaining staff in IT positions and in response to ITAC's strategic planning efforts.

MEMBERS

- Larry DeFrance, Chair, Department of Corrections
- Barney Benkelman, Department of Fish, Wildlife and Parks
- Jeff Brandt, Staff, Department of Administration, ISD
- Bob LaRue, Department of Agriculture
- Dave Nagel, Department of Labor and Industry
- Joel Oelfke, Public Service Commission
- Hank Trenk, Legislative Branch, Legislative Services Division
- Gregg Wheeler, Office of the Secretary of State
- Gary Wulf, Department of Commerce

ACTIONS

The Subcommittee's report, *Recruitment and Retention of State Information Technology Professionals,* contained four recommendations:

1. **Retain Pay Exception for IT Positions.** The pay exception issued in September 1997 to address retention problems for existing employees should remain in effect.
2. **Implement Immediate Grade Level Adjustments.** IT employees could be granted a salary increase equivalent to an increase in one pay grade. The increase would be based on the existing pay plan. The increase would apply to all grades that contain IT professionals, supervisors and managers. For example, an employee in a position classified at a grade 12 with a "current market ratio" of .95 could be granted a salary increase equivalent to a grade 13 with a market ratio of .95.
3. **Develop and Implement a Market Based IT Broadbanded Pay Plan.** Begin to develop and implement a market based IT pay plan based on broadbanding. A broadbanding IT pay system should be researched, developed and implemented based on efforts currently underway in the State Personnel Division.
4. **Study Additional Strategies for Recruiting and Retaining IT Professionals.** Study and propose additional improvements in the state's employment package in the areas of recruitment, benefits, work environment, career development and recognition. Some employment "incentives", such as those related to the work environment and employee recognition, can be developed and implemented by individual agencies. Others, however, will require extensive study, review and approval by the State Personnel Division and others before adoption. ITMC should continue to provide assistance to the appropriate advisory groups and agencies in identifying effective and competitive long-term changes to the state employment package.

These recommendations were presented to, and approved by ITMC. ITAC adopted recommendations 1, 2 and 4 as presented. Recommendation 2 was modified and as a result, in June 1998, Lois Menzies, Director, Department of Administration, approved a new Pay Plan exception for discretionary agency implementation for up to 40% of IT personnel per year.

ITMC Recruitment and Retention Subcommittee Phase II

This Subcommittee was established to deal with recommendation 4 of the original Subcommittee on studying additional strategies for recruiting and retaining IT professionals.

MEMBERS

- Dave Nagel, Chair, Department of Labor and Industry
- Barney Benkelman, Department of Fish, Wildlife and Parks
- Jeff Brandt, Staff, ISD, Department of Administration
- Larry DeFrance, Department of Corrections
- Barb Kain, Department of Administration
- Bob LaRue, Department of Agriculture
- Joel Oelfke, Public Service Commission

ACTIONS

The Phase I report, *Information Technology Recruitment and Retention Strategies,* listed strategies used by the private sector and government entities to improve the recruitment and retention of valued information technology professionals. It was the working document for the Subcommittee in Phase II. The Subcommittee evaluated each item on the list in terms of whether it contravened existing policy or statutory mandate, or perhaps required new policy or enabling legislation. The following two recommendations were made to ITMC and ITAC.

1. That ITMC endorse the continued effort of those items identified as Future Opportunities.
2. That ITAC indicate for each item listed under Future Opportunities whether or not further research is desired. If further research is desired, it is recommended ITAC make an official request of the group identified in the Entity column.

ITMC endorsed the Subcommittee's recommendations. ITAC prioritized the items found under Future Opportunities for future research.

ITMC Desktop Database Subcommittee

This Subcommittee was charged with evaluating the State's desktop database standard in light of the switch to Microsoft Office as the State standard for word processing, spreadsheet and presentation graphics.

MEMBERS

- Audrey Hinman, Chair, ISD, Department of Administration
- Gary Poepping, ISD, Department of Administration
- Randy Holm, ISD, Department of Administration
- Joel Oelfke, Public Service Commission
- Steve Eller, Legislative Services Division
- Terry Johnson, Legislative Fiscal Division
- John Elrod, Department of Revenue
- Alan Wintersteen, Department of Agriculture

ACTIONS

The Subcommittee made three recommendations:

1. Microsoft Access become a state standard desktop database
2. Microsoft Visual Basic become a state standard programming language
3. Lotus Approach remain a state standard desktop database

The Subcommittee's recommendations were adopted by the Council. The recommendations were also adopted by ITAC.

Training Subcommittee

This Subcommittee was formed in response to the strategic planning efforts of the Information Technology Advisory Council (ITAC). The Subcommittee was asked to look and the Support and Training Issue.

MEMBERS

- Wendy Wheeler, Chair, ISD, Department of Administration
- Tripp Hammer, Department of Environmental Quality
- Hank Voderberg, Department of Administration

ACTIONS

The Subcommittee developed eight recommendations in the training area. (Past efforts to look at the support area were identified, but no recommendations were made by the Subcommittee.)

- **Issue 1 –** How do we provide training to all levels of IT users?

    1. ITMC recommends that the State continue to support the delivery of technical training to all levels of IT users.

2. ITMC recommends that a training infrastructure be developed to take advantage of the technical expertise developed by agency technical staff, including ISD, as well as short technically informative sessions by outside experts.
3. ITMC recommends that professional IT staff receive a minimum of five days of professional development or continuing education per year.
4. ITMC recommends establishing a training clearinghouse via an intranet page to enable staff to share experiences, recommendations or critiques of training taken.
5. ITMC recommends that the State research providing courses online.
6. ITMC recommends that the State make more educational opportunities available in the following areas:
   - More project management
   - More systems analysis
   - More upper management briefings

   This list is non-exclusive; additional topics may be added by ITMC.
7. ITMC recommends that a group be established to develop new training strategies and models for IT professionals that integrate with the new competency-based pay plan system.
8. ITMC recommends that technical managers should provide subject matter expertise to assist SPD rewrite occupational specifications.

The recommended actions from the ITMC Training Subcommittee were all adopted by the ITMC Executive Board and ITAC.

- **Issue 2 –** Covered by the ITMC Recruitment and Retention Subcommittee.
- **Issue 3 –** How do we determine the appropriate approach to support services?

  Summary of past activity in this area:

  - *Outsourcing in the Public Sector*, 1993
    Studied advantages and disadvantages of outsourcing
    Studied outsourcing in other state governments
  - *IT Services Options Analysis and Recommendation*, 1996
    Studied options for IT services within state government (status quo, attached to agency, department with commission, department without commission)
    Studied option for IT as a quasi public agency
    Studied option for IT as public corporation
    Studied option for IT as private corporation
  - *Public Corporation Organizational Model for Providing IT Services*, 1996
    Governor requested a study of providing IT services through a public-private partnership corporation
    Compared ISD to the San Diego Data Processing Corporation

- *ITAC Coordination Task Force Personal Services Report*, 1996
  Studied IT support services obtained from both IT classified and non-IT classified personnel
  Studied sharing of IT support services
  Studied impact of new technologies on support requirements
  Studied preferences on obtaining additional support services

- Agency Sharing of Distributed IT Resources, 1998
  Proposed EPP item for FY2000/01
- ITAC voted not to move this proposal forward
- ISD pilot of shared resources project, ITAC Resources Subcommittee
  Alternative to EPP proposal

Recommendation: ITMC has no recommendation and feels no need to take further action on this issue.

Electronic Document Management and Imaging Systems (EDMIS) Subcommittee

This Subcommittee was charged with establishing and publishing State EDMIS standards and recommendations, and to set strategic direction for the enterprise in regards to EDMIS technology.

MEMBERS

- Brett Boutin, Chair, ISD, Department of Administration
- Rod Sheppard, Teacher's Retirement Division, Department of Administration
- Tom Woodgerd, Department of Justice
- Pam Dale, Department of Justice
- Dewey Barnes, Department of Public Health and Human Services
- John Hawe, Department of Labor and Industry
- Lynn Keller, Records Management Bureau, Office of the Secretary of State

ACTIONS

- Published *State of Montana Imaging Standards and Recommendations*. Adopted by ITMC and ITAC in June 1996. For more information see **http://www.state.mt.us/isd/planning/it_init/imag_doc/index.htm.**
- Issued a Request for Proposal (RFP) for an EDMIS vendor and a state standard software. Evaluated proposals and selected KPMG–Peat Marwick as the vendor, and FileNet as the software. The vendor and standard software have been in place since July 1997.
- Submitted a proposal for a centralized imaging service within ISD for shared use by all agencies.

Enterprise Bill Status Subcommittee

This Subcommittee was formed to work out the details of consolidating state agency bill status tracking systems in conjunction with the rewriting of the Legislative Bill Status System to the Legislative Automated Workflow System (LAWS) in Oracle. The new system will be used in the 1999 session. Several state agencies had existing bill status tracking systems which interfaced to the old Legislative Bill Status System. Since each state agency would have had to rewrite their bill status tracking system to interface with the new (Oracle) Legislative Bill Status System, it was decided that this was a good opportunity to consolidate all of the state agency bill status tracking systems into one system which all agencies could use.

MEMBERS

- Steve Eller, Legislative Branch
- Tom Mulvaney, Legislative Branch
- Steven St. John, ISD, Department of Administration
- Barry Fox, ISD, Department of Administration
- Irvin Vavruska, ISD, Department of Administration
- Doug Booker, Military Affairs
- Larry Finch, Department of Revenue
- Hank Voderberg, Department of Administration
- Joel Oelfke, Public Service Commission
- Pam Dale, Department of Justice
- Tom Woodgerd, Department of Justice
- Colleen Urquhart-Fillner, Office of the Governor
- Steve Colberg, Office of the Governor
- Jan Clack, Department of Commerce
- Guy Stavnes, Department of Commerce
- Karlee Smith, Department of Fish, Wildlife and Parks
- John Wilkins, State Fund
- Cheryl Grey, Department of Labor and Industry
- Betty Bergstrom, Department of Labor and Industry
- Gordon Koterba, Department of Transportation

ACTIONS

Successfully developed a Bill Tracking System for use by the enterprise.

Appendix

PC/LAN Software Supported by ISD

http://www.state.mt.us/isd/techinfo/software.htm

	Operating System	Version	Comments
BACKUP			
Palindrome Backup Director	NetWare, NT	4.11	Site License purchased by ISD
COMMUNICATION			
Extra! Extended for DOS	DOS	3.5	Site License purchased by ISD Versions back to 2.2 supported
Extra! For Windows	Win 3.x	5.0	Site License purchased by ISD Versions back to 3.3 supported
Extra! Personal Client	Win 3.x, 95	6.2	Site License purchased by ISD Versions back to 6.1 supported Includes IP stack for Internet access.
NetWare Connect			Monthly charge for use of ISD facility
Panlink	DOS	3.2C	Sunset
WinFrame	DOS, Win 3.x, 95, NT	1.6	Monthly charge for use of ISD facility
Xtalk XVI	DOS	3.8	for 386 PCs with < 2M memory
Xtalk Mark IV	DOS	2.1.2	
Xtalk	Win 3.x	2.3	
Xtalk	Win 95	3.0	
DATABASE			
Oracle 7 Server	NetWare, Win NT	7.2 & 7.3	Site License purchased by ISD
Personal Oracle Ent.	Win 3.x, 95, NT	7.1, 7.2 & 7.3	Site License purchased by ISD
Personal Oracle Lite	Win 95, NT	2.3	

	Operating System	Version	Comments
Oracle Pro*C	Win 3.x	2.0	
Oracle Pro*C	Win 95, NT	2.2	
Oracle Pro*Cobol	Win 3.x	1.6	
Oracle Pro*Cobol	Win 95, NT	1.8	
Developer 2000	Win 3.x, 95, NT	1.3	Includes Forms, Reports, Graphics Site License purchased by ISD
Designer 2000	Win 3.x, 95, NT	1.3	Site License purchased by ISD
Discoverer 2000	Win 3.x, 95, NT	2.0	
Discoverer 3.0	Win 95, NT	3.0	
SQL Plus	Win 3.x, 95, NT	3.2.2 & 3.3	
Network Manager	Win 3.x, 95, NT	3.0.1	
Enterprise Manager	Win 95, NT	1.2 & 1.3	
SQL*NET SPX/IPX	Win 3.x, 95, NT	2.3	Site License purchased by ISD
SQL*NET TCP/IP	Win 3.x, 95, NT	2.3	Site License purchased by ISD
PowerBuilder		4.0	Sunset
PowerBuilder Desktop		4.0	Sunset
InfoMaker		4.0	Sunset
PFS Professional File	DOS	2.0	Sunset
dBASE III+	DOS	1.1	Sunset 1/1/98, no longer supported by ISD
dBASE IV	DOS	1.5	Sunset 1/1/98, no longer supported by ISD
Lotus Approach	Win 3.x, Win 95	3.0, Win 97	For personal or small database applications. Use Oracle for larger agency or enterprise applications
Microsoft Visual Basic	Win 95	5.0 (pro)	vba also
Microsoft Access	Win 95	97	

	Operating System	Version	Comments
R:Base	DOS	3.1C & 4.5++	Sunset 1/1/98, no longer supported by ISD
E-MAIL/CALENDAR			
ZIP!Office	Win 3.x	1.26	For PCs on a LAN Site License purchased by ISD Win 95/NT clients should use Microsoft Outlook
ZIP!Mail	DOS	1.23	For PCs on a LAN Site License purchased by ISD
EMC2/TAO	MVS	3.03	For mainframe terminals Site License purchased by ISD
EMC2/PCLink	DOS, Win 3.x	356 & 402	For PCs not on a LAN Site License purchased by ISD
Microsoft Outlook	Win 95, NT	98	New standard 2/1/98 Replaces ZIP!Office Site License purchased by ISD
GRAPHICS			
CorelDraw	Win 3.x, Win 95	5, 6, 7, 8	Limited support, also 3 & 4
Freelance	DOS	3.01	
Freelance	Win 3.x	2.1	For Win 3.x users Win 95/NT clients should use Microsoft PowerPoint.
Microsoft PowerPoint	Win 95, NT	97	New standard 2/1/98 Replaces Lotus Freelance Site License purchased by ISD
INTERNET			
LAN Workplace	DOS	5.0	Agencies purchase through ISD's master license agreement with Novell. Interim standard for DOS users, replaced by Extra! Personal Client for Windows users.
Microsoft Internet Explorer	Win 95	4.01SP	ISD support switched from Netscape Navigator to Internet Explorer 10/7/98.

	Operating System	Version	Comments
OPERATING SYSTEM			
DOS		6.22	Recommend 5.0 or higher Recommend move to Windows
Windows		3.1	For older PCs (386 or 486, 4-8M memory)
Windows 95		Rev. A Rev. B	For newer PCs (486/66 or Pentiums, 16M memory)
Windows 98			Recommend for new PCs unless 95 or NT is required
Windows NT Workstation		4.0	
NetWare		3.12	Recommend move to 4.x
NetWare		4.1, 4.11	Master License Agreement purchased by ISD
ONLINE DOCUMENTATION AND HELP			
Adobe Acrobat Reader	Win 3.x, 95, NT	3.0	Free from Adobe
Assist/Vision	DOS	2.0	Site License purchased by ISD
IBM Library Reader	DOS, Win 3.x	1.2 & 2.0	Site License purchased by ISD
Oracle Book runtime	Win 3.x, 95, NT	2.2.0	Site License purchased by ISD
REPORT DISTRIBUTION			
DocumentDirect	Win 3.x	1.4	Site License purchased by ISD
DocuAnalyzer	Win 3.x	2.01	Site License purchased by ISD 6-month lease fee recharged to agency
SPREADSHEETS			
Lotus 1-2-3	DOS	2.4	For 286 PCs with < 2M memory
Lotus 1-2-3	DOS	3.4	For 386 PCs with > 2M memory
Lotus 1-2-3	DOS	4.0	Recommend 3.4 for DOS users
Lotus 1-2-3	Win 3.x	5.0	For Win 3.x users Win 95/NT clients should use Microsoft Excel

	Operating System	Version	Comments
Microsoft Excel	Win 95, NT	97	New standard 2/1/98 Replaces Lotus 1-2-3 Site License purchased by ISD
STATISTICS			
SAS	Win 3.x	6.11 & 6.12	Site license purchased by ISD One-time initial license fee recharged to agency
VIRUS PROTECTION			
Network Associates VirusScan	DOS	3.2.0	Site license purchased by ISD
Network Associates VirusScan	Win 3.x, 95, NT	3.2.0	Site license purchased by ISD
Network Associates Netshield for NetWare	NetWare	3.2	Site license purchased by ISD
Network Associates Netshield for NT	NT	3.2	Site license purchased by ISD
WORD PROCESSING			
WordPerfect	DOS	5.1	For low-end DOS machines
WordPerfect	DOS	6.0	
WordPerfect	Win 3.x	6.1	Win 95/NT clients should use Microsoft Word
Microsoft Word	Win 95, NT	97	New standard 2/1/98 Replaces WordPerfect Site License purchased by ISD

Mid-tier Software Supported by ISD

http://www.state.mt.us/isd/techinfo/midtier.htm

	Operating System	Version	Comments
DATABASE			
Oracle Server	Win NT, Netware, IBM AIX, VAX/VMS, DEC/Unix, Sun Solaris, Alpha/NT, Alpha/VMS, OS/390	7.1, 7.2, 7.3, & 8.0	Site License purchased by ISD
Oracle Pro*C		2.2	
Oracle Pro*Cobol		1.8	
SQL Plus		3.2.2, 3.3, & 8.0	
Network Manager		3.0.1	
SQL*Net TCP/IP & SPX/IPX		2.3 & 8.0	Site License purchased by ISD
OPERATING SYSTEM			
Windows NT Server		3.51 & 4.0	State standard, but only raised floor support in ISD - no agency support
Digital Unix, IBM AIX		4.0, 4.3	State standard, but only raised floor support in ISD - no agency support

Mainframe Hardware Supported by ISD

http://www.state.mt.us/isd/techinfo/mainfram.htm

MAINFRAME

- One (1) IBM 9021-832
- 1,024 MB central storage
- 2,048 MB expanded storage
- 173 MIPS (million instructions per second) computing power

DASD CONFIGURATION

- 9393 T82-RVA (Ramac Virtual Array), 420 GB (256 Volumes)
  Eight (8) ESCON Channel Paths, Controller with 3072 MB Cache
- 9393 T82-RVA (Ramac Virtual Array), 290 GB (256 Volumes)
  Eight (8) ESCON Channel Paths, Controller with 3072 MB Cache
- 3990-3 DASD (90.8 GB), Four (4) ESCON Channel Paths, 256 MB cache (32 volumes), 3990-3 DASD Controller

MID-TIER

- One (1) Digital Alpha 4100/Digital UNIX 40.B
  533 Mhz-2GB RAM, Dual CPU, 60 GB Storage, RAID Zero
- One (1) Digital Alpha 1000A/Digital UNIX 40.B
  333 Mhz-1 GB RAM, 20 GB Storage
- One (1) Digital Alpha 8400/Digital UNIX 40.B, Dual
  625 Mhz-4 GB RAM, 20 GB Storage, RAID Zero
- One (1) RS/6000 A/X 4.3.1, 332 Mhz, 1 GB RAM, 27 GB Storage

MAGNETIC TAPE

- Sixteen (16) 3490-E cartridge drives
- Two (2) 3480 cartridge drives
- Two (2) 3420 reel drives
- Six (6) 3590 MAGSTAR cartridge drives (800 cartridge library)
- 2,000 reel tape library
- 25,000 cartridge tape library

PRINTERS

- One (1) IBM 4245 Impact (2,000 lines per minute)
- Three (3) Xerox 4890 spot Color Laser (96 pages per minute)
- One (1) IBM 3835 Laser Continuous Forms
- Three (3) 3816 – ID Laser

TERMINALS

- 1,100 dumb terminals
- 7,000 smart terminals (PCs with emulation)

Mainframe Software Supported by ISD

OPERATING SYSTEM, SUBSYSTEMS AND MONITORS

- MVS/ESA, JES2 — OS/390 R2
- TSO/E, ISPF and SDSF
- CMF
- Omegamon for MVS
- Unix System Service
- AF/Operator
- AF/Remote

TELECOMMUNICATIONS SOFTWARE, ACCESS METHODS, TOOLS AND MONITORING AIDS

- VTAM
- BTAM
- TCP/IP
- DECDTF
- HCF
- Omegamon for VTAM
- Netview
- CICS/ESA
- CICS/MVS, CICS File Transfer, CICS-CEMT, CICS-Juggler, CICS-Message, CICS-News, OMEGAMON II for CICS, XPEDITER, AbendAid/FX, Assist/GT, BMS/GT and DISOSS

PROGRAMMING LANGUAGES, COMPILERS AND USAGE TOOLS

- High Level Assembler
- COBOL, COBOL & CICS Command Level Conversion Aid (CCCA), COBOL Report Writer Precompiler
- Cobol for MVS
- VS FORTRAN
- C / C++
- Panvalet, Panvalet/ISPF
- Visual Gen
- LE for MVS
- PL/1

DATABASE AND RELATED PRODUCTS

- IDMS, Developer Tool Kit (for IDMS) and DBA Tool Kit
- Oracle

INTERNET APPLICATIONS

- Websphere Application Server

SECURITY

- ACF2

SESSION MANAGERS

- CL/SUPERSESSION

TAPE/DASD MANAGEMENT

- CA-1
- DMS/OS
- DF/SMS
- IXFP
- Snapshot
- Autotrieve

PRINT SERVICES

- PSF/MVS
- VPS/VMCF

JOB SCHEDULING/RERUN/RESTART

- Control-M, Control-R

REPORT DISTRIBUTION

- INFOPAC-RDS

GRAPHICS

- GDDM
- OGL/370

UTILITIES

- DYL-260/DYL-Sort
- SYNCSORT
- PC File Transfer
- SAS
- COMPAREX
- LISTCAT Plus
- MXG
- XPEDITER
- TIC TOC
- HARBOR

REFERENCE INFORMATION

- MVS/QuickRef
- BookManager

Glossary

AARP	Automated Accounting and Reporting Project (Department of Justice)
ACIS	Adult Correctional Information System (Department of Corrections)
ACTS	Agent Commission Tracking System (State Fund)
ADIOS	Automated Data Integration Operating System (Department of Public Health and Human Services)
AFIS	Automated Fingerprint Identification System (Department of Justice and Corrections)
ALI	Automatic Location Identification
ALS	Automated Licensing System (Department of Fish, Wildlife and Parks)
AMPS	Automated Medical Payment System (State Fund)
ANI	Automatic Number Identification
ARM	Administrative Rules of Montana
AS/400	IBM minicomputer system
Asset management	Maintaining owned items. Often connected with the financial aspect of ownership
ATM	Automatic Teller Machine
Backbone	The top level in a hierarchical network
Bandwidth	The difference between the highest and lowest frequencies of a transmission channel
BBS	Electronic Bulletin Board System
BIOS	Basic Input/Output System. On PCs, controls the first stage of the bootstrap (boot-up) process
BIS	Benefits Information System (Department of Public Health and Human Services)
BPR	Business Process Reengineering
Cadastral	A survey, map, or plan on a large scale so as to represent the exact positions and dimensions of objects and estates
CAMAS	Computer Assisted Mass Appraisal System (Department of Administration)
CAT	Case Tracking System (Department of Labor and Industry)

CD, also CD-ROM or CD ROM	Compact Disk Read Only Memory
CDS	Central Database System (Department of Public Health and Human Services)
CEIC	Census and Economic Information Center (Department of Commerce)
Certificate of authority	Sometimes used in place of the term "digital certificate". A code that can be attached to an electronically transmitted message that uniquely identifies the sender
CICS	Customer Information Control System (IBM)
CJIN	Criminal Justice Information Network (Department of Justice)
CODECs	Any technology for compressing and decompressing data. Can be implemented in software, hardware, or a combination of both
Criminal History Records System	Department of Justice
CSBG	Community Services Block Grant (Department of Public Health and Human Services)
Data warehouse	System for storing, retrieving, and managing large amounts of data
DBMS	Database Management Systems
Digital cash	Virtual cash possibly stored in a card such as a smart card
Disaster recovery plan	Organized plan for the restoration of computer systems and networks in the eventuality of a disaster
Distance learning	Learning that takes place via electronic media linking instructors and students who are not together in a classroom
DOARS	Using electronic means in courtroom evidence presentation (Judicial Branch)
Document imaging and workflow system	Scanning paper documents into electronic format and the movement of these documents through an organization
Document management	Tracking of documents throughout an organization. Often related to archiving and indexing of documents
EBC	Electronic Birth Certificate (Department of Public Health and Human Services)

EBT	Electronic benefits transfer – Electronic transfer of benefits (often government social services benefits) to an account or card, such as a smart card, of the recipient
EC	Electronic commerce – conducting of business communication and transactions over networks and through computers
E-commerce	Electronic commerce or EC
EDI	Electronic data interchange – Involves the electronic communication of information, including orders, confirmations, and invoices, between organizations
EDMIS	Electronic Document Management and Imaging System
EFT	Electronic funds transfer – Refers to the movement of payments and payment-related information via EDI
Electronic filing	Electronic submission of documents or other information
Electronic signature	Sometimes used in place of the term "digital signature". Extra data appended to a message which identifies and authenticates the sender and message data using encryption
E-mail	Electronic mail
Encryption	Any procedure used in cryptography to encode data in order to prevent any but the intended recipient from reading that data
EPP	Executive Planning Process
Fiber-optic	A technology that uses glass (or plastic) threads (fibers) to transmit data
Firewall	Virtual "wall" using security software to protect networked machines from unauthorized access by individuals or other outside sources
FTP	File Transfer Protocol – The protocol/format used on the Internet for sending files
FY	Fiscal Year
GIS	Geographic Information System – System for capturing, storing, manipulating, analyzing, and displaying data related to positions on the Earth's surface
GIS clearinghouse	Collection of GIS data and maps open to the public

GroupWare	Software that can be used by a group of people who are working on the same information but may be distributed in space
Hackers	A person who explores the details of programmable systems and how to stretch their capabilities
Hardware	The physical, touchable, material parts of a computer or other system
HEAT	Help Desk Expert Automation Tool (Department of Public Health and Human Services)
IDEA	Integrated Data for Evaluation and Assessment (Department of Public Health and Human Services)
IDMS	Integrated Data Management System
Imaging	Scanning paper documents into graphical or electronic format
Internet	Collection of large, interconnected, backbone computer networks spanning the globe
Intranet	Any network which provides similar services within an organization to those provided by the Internet outside it but which is not necessarily connected to the Internet
ISD	Information Services Division (Department of Administration)
IT	Information Technology
IT enterprise	In the instance of this publication, the IT community within the State of Montana
IT sponsorship	The backing of IT initiatives
ITAC	Information Technology Advisory Council (Advisory to the Department of Administration)
ITMC	Information Technology Managers Council (Advisory to the Department of Administration)
ITS	Intelligent Transportation Systems (Department of Transportation)
IVR	Interactive Voice Response
JCMS	Judicial Case Management System (Judicial Branch)
LAD SBAS	Interface system used by the Legislative Audit Division to extract and analyze SBAS data
LAN	Local Area Network – A computer network that spans a relatively small area

LAWS	Legislative Automated Workflow System (Legislative Branch)
LIMS	Laboratory Information Management System (Department of Justice)
LiveScan System	Automated fingerprinting system (Department of Corrections and Justice)
MAEFAIRS	Montana Automated Education, Financial and Information Reporting System (Office of Public Instruction)
Mainframe	Large and fast central computer often serving hundreds of users
MBARS	Montana Budget Analysis and Reporting System (Department of Administration and the Governor's Office)
MCA	Montana Code Annotated
MCJISP	Montana Criminal Justice Information Services Project (Department of Justice)
MEPS	Montana Eligibility and Payment System (Department of Public Health and Human Services)
META	Metamorphosis Project (Department of Revenue)
METNET	Montana Educational Telecommunications Network (Office of Public Instruction and Department of Administration)
MGIC	Montana Geographic Information Council
MIBS	Montana Integrated Budget System (Legislative Branch and the Governor's Office)
Microprocessor chip	Central processing unit of a microcomputer
Mid-tier/midrange computing	Using network servers and microcomputers to accomplish distributed processing
MIS	Management Information System – A computer system designed to provide management personnel with up-to-date information on an organization's performance
MISTICS	Montana Integrated System To Improve Customer Service (Department of Labor and Industry)
MLGGC	Montana Local Government GIS Coalition
MMIS	Medicaid Management Information System (Department of Public Health and Human Services)
Montana Online	Internet front door to Montana State Government

MPSCC	Montana Public Safety Communications Council
MT PRRIME	Montana Project to Reengineer the Revenue and Information Management Environment (Department of Administration)
MVS	Multiple Virtual Storage, mainframe operating system which superceded OS/390
NCIC	National Crime Information Center 2000 – FBI national effort to improve criminal justice information systems
NDS	NetWare Directory Services – Provides a logical tree-structure view of all resources on the network so that users can access them without knowing where they're physically located
Network Operating System	An operating system which includes software to communicate with other computers via a network
Network Security	Any effort made to protect a computer network from danger or risk of loss making the network safe from errors, intruders, and other threats
NMG	Network Managers Group
Novell NetWare	State standard client/server network operating system
NRIS	Natural Resources Information System (State Library)
NSDI	National Spatial Data Infrastructure
OBPP	Office of Budget and Program Planning (Governor's Budget Office)
OCR	Optical Character Recognition – Reading text from paper and translating the images into a form that computers can manipulate
One-Stop Business Licensing Project	Department of Revenue
Online	Used herein to refer to information or a system accessible via the Internet
Operating System	Core program that a computer runs
OPPEN	Office Public/Private Enterprise Network (Secretary of State)
Oracle	Relational database system
OS	Operating System
P/P/P also PPP	Payroll/Personnel/Position Control (Department of Administration)

PAALS	Policy Audit, Accounting, and Loss control System (State Fund)
PAMS	Property Accountability Management System (Department of Administration)
PARIS	Purchasing Accounting Reporting Information System (Department of Administration)
PBX	Private Branch Exchange – A private telephone network used within an enterprise
PC	Personal Computer
PeopleSoft	Information technology corporation software being implemented for MT PRRIME
POINTS	Process Oriented and Integrated System (Department of Revenue)
POL	Professional and Occupational Licensing (Department of Commerce)
PSAP	Public safety answering point
PSCTF	Public Safety Communications Task Force
RDBMS	Relational Database Management System
Remote dialup access	Ability to access a remote computer with another computer and modem
RF	Radio frequency
RFP	Request for Proposal
RIS	Roadway Imaging System (Department of Transportation)
RWIS	Remote Weather Information System (Department of Transportation)
SBAS	Statewide Budgeting and Accounting System (Department of Administration)
Scanning	Creating an image that a computer can manipulate of a document, picture, or other element by passing it through an optical scanner
SEC	SummitNet Executive Council
Smart card	A small electronic device about the size of a credit card that contains electronic memory, and possibly an embedded integrated circuit
Software	Computer program

SQL	Structured Query Language: Standardized programming language for requesting information from a database
STARS	State Truck Activities Reporting System (Department of Transportation)
STAWRS	Simplified Tax And Wage Reporting System (Department of Revenue)
SummitNet	State and Universities of Montana Multi-Protocol Network
TCP/IP	Transmission Control Protocol/Internet Protocol
Telecommunications	Refers to all types of data transmission, from voice to video
Telefiling	Filing information via a telephone system
TIS	Transportation Information System (Department of Transportation)
TWG	Montana Interagency Technical Working Group
UCC	Uniform Commercial Code
UPS	Uninterruptible Power Supply
VHSP	Virtual Human Services Pavilion (Department of Public Health and Human Services)
Video conferencing	Conducting a conference between two or more participants at different sites by using computer networks to transmit audio and video data
VINE	Victim Identification and Notification Everyday (Department of Corrections)
VMS	Virtual Memory System – A minicomputer and workstation operating system
VPN	Virtual Private Network – Network constructed by using public wires to connect nodes Uses encryption and other security mechanisms to ensure that only authorized users access the network and that the data cannot be intercepted
WAN	Wide Area Network – A computer network that spans a relatively large geographical area
WCAP	Workers' Compensation Automated Project (Department of Labor and Industry)
Web also WWW	World Wide Web
Web site	Location on the Internet

WIC	Women, Infants, and Children (Department of Public Health and Human Services)
WIM	Weigh-In-Motion (Department of Transportation)
Workflow	Document/information routing within an organization
WTI	Western Transportation Institute
WWW also web	World Wide Web – A system of Internet servers that support specially formatted documents
Year 2000 or Y2K	Problem as the result of a decades-old computer programming convention of storing only the last two digits of the four-digit year in computer systems

Index

SYMBOLS

A

B

C

D

E

F

G

H

I

J

L

M

N

O

P

R

S

T

U

V

W

Y


ISD
Information Services Division